



Environmental Protection & Compliance Division P.O. Box 1663, MS K491 Los Alamos, New Mexico 87545 (505) 667-2211 National Nuclear Security Administration Los Alamos Field Office 3747 West Jemez Road, A316

Los Alamos, New Mexico, 87544 (505) 667-5105/Fax (505) 667-5948

MAR 0 4 2021

Date: Symbol:

EPC-DO: 21-064

LA-UR:

21-21693

Locates Action No.:

Mr. Don Meyer Hazardous Waste Bureau New Mexico Environment Department 2905 Rodeo Park Drive East, Building 1 Santa Fe, NM 87505-6303

Subject: Response to Request for Information 2020 Hazardous Waste Minimization Report, Los Alamos

National Laboratory, EPA ID#0890010515

Dear Mr. Meyer:

This correspondence transmits a response to a letter dated December 18, 2020 from the New Mexico Environment Department-Hazardous Waste Bureau (NMED-HWB) to the U.S. Department of Energy (DOE) National Nuclear Security Administration and Environmental Management, Los Alamos Field Offices (NA-LA and EM-LA, respectively). The letter requests further information regarding the most recent Waste Minimization Report (EPC-DO-20-329, LA-UR-20-28226) drafted in accordance with the Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit). The Permit authorizes the DOE, Triad National Security, LLC (Triad), and Newport News Nuclear BWXT-Los Alamos, LLC (N3B), to manage, store, and treat hazardous waste at LANL.

The letter requests information associated with six waste generating processes and the associated waste management information for those processes. While both the Triad and the N3B portions of the report are referenced in the letter, the Permittees determined that the listing of processes in the letter were all included within the Triad portion of the report. Enclosure 1 to the letter consists of the Triad and DOE prepared response to include information requested by the NMED-HWB.

If you have questions, comments, or would like to discuss the information in this response further, please contact Karen E. Armijo, NA-LA, at (505) 221-3664, or Patrick L. Padilla, Triad, at (505) 412-0462.

Sincerely,

JENNIFER Digitally signed by JENNIFER PAYNE (Affiliate)
PAYNE (Affiliate)
Date: 2021.02.24 18:37:08
-07/00*

Jennifer E. Payne Division Leader

Environmental Protection and Compliance Division

Triad National Security, LLC Los Alamos National Laboratory

Sincerely,

Karen E. Digitally signed by Karen

Armijo Date: 2021.02.26

Karen E. Armijo

Permitting and Compliance Program Manager National Nuclear Security Administration

Los Alamos Field Office
U.S. Department of Energy



JEP/KEA/PLP:lvh

Enclosures (s): 1) Response to Request for Information 2020 Hazardous Waste Minimization Report

Copy: Kevin Pierard, NMED-HWB, Santa Fe, NM, kevin.pierard@state.nm.us Neelam Dhawan, NMED-HWB, Santa Fe, NM, neelam.dhawan@state.nm.us Siona Briley, NMED-HWB, Santa Fe, NM, siona.briley@state.nm.us Mitchell Schatz, NMED-HWB, Santa Fe, NM, mitchell.schatz@state.nm.us Janine Kraemer, NMED-HWB, Santa Fe, NM, janine.kraemer@state.nm.us Karen E. Armijo, NA-LA, karen.armijo@nnsa.doe.gov Stephen Jochem, NA-LA, stephen.jochem@nnsa.doe.gov Adrienne L. Nash, NA-LA, adrienne.nash@nnsa.doe.gov Marcus Pinzel, NA-LA, marcus.pinzel@nnsa.doe.gov Darlene Rodriguez, NA-LA, darlene.rodriguez@nnsa.doe.gov Dennis Svatos, NA-LA, dennis.svatos@nnsa.doe.gov Michael J. Weis, NA-LA, michael.weis@nnsa.doe.gov M. Lee Bishop, EM-LA, lee.bishop@em.doe.gov Arturo Q. Duran, EM-LA, arturo.duran@em.doe.gov Michael W. Hazen, Triad, ALDESHQSS, mhazen@lanl.gov William R. Mairson, Triad, ALDESHQSS, wrmairson@lanl.gov Enrique Torres, Triad, EWP, etorres@lanl.gov Jennifer E. Payne, Triad, EPC-DO, jpayne@lanl.gov Jackie C. Hurtle, Triad, EPC-WMP, jhurtle@lanl.gov Patrick L. Padilla, Triad, EPC-WMP, plpadilla@lanl.gov Terence L. Foecke, Triad, EPC-ES, tfoecke@lanl.gov P. Michael Moss, Triad, EPC-ES, moss@lanl.gov Darlene T. Trujillo, Triad, EPC-WMP, darlenet@lanl.gov William Alexander, N3B, william.alexander@em-la.doe.gov Emily Day, N3B, emily.day@em-la.doe.gov Pamela Maestas, N3B, pamela.maestas@em-la.doe.gov Joseph Murdock, N3B, joseph.murdock@em-la.doe.gov rcra-prr@lanl.gov eshass-dcrm@lanl.gov lasomailbox@nnsa.doe.gov locatesteam@lanl.gov epc-correspondence@lanl.gov











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Sincerely,

JENNIFER

Digitally signed by JENNIFER PAYNE (Affiliate)

PAYNE (Affiliate) Date: 2021.02.24 16:37:08

Jennifer E. Payne Division Leader

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Triad National Security, LLC Los Alamos National Laboratory Sincerely,

Karen E.

Digitally signed by Karen

Armijo

E Armijo Date 2021.02.26 09:27:23 -07'00"

Karen E. Armijo

Permitting and Compliance Program Manager National Nuclear Security Administration

Los Alamos Field Office

U.S. Department of Energy



ENCLOSURE 1

Response to Request for Information 2020 Hazardous Waste Minimization Report

EPC-DO-21-064

LA-UR-21-21693 Unclassified

MAR 0 4 2021
Date: ____

Response to Request for Information 2020 Hazardous Waste Minimization Report

Introduction

This document responds to a letter dated December 18, 2020, from the New Mexico Environment Department- Hazardous Waste Bureau (NMED-HWB) to the U.S. Department of Energy (DOE) National Nuclear Security Administration and Environmental Management, Los Alamos Field Offices (NA-LA and EM-LA, respectively). The letter requests further information regarding the most recent Waste Minimization Report (Report). The Los Alamos National Laboratory (LANL) Hazardous Waste Facility Permit (the Permit) which authorizes the U.S. Department of Energy (DOE), Triad National Security, LLC (Triad), and Newport News Nuclear BWXT-Los Alamos, LLC (N3B) (Collectively the Permittees), to manage, store, and treat hazardous waste at LANL. The annual Waste Minimization Report that is drafted in accordance with Permit Section 2.9 contains information associated with the Permittees waste minimization efforts as well as information on the waste types and quantities of waste generated at the site in the previous fiscal year (FY). The NMED-HWB requests additional information concerning processes generating wastes; management of wastes including storage and/or treatment; and any disposal documentation associated with the waste streams listed in the NMED-HWB's December 18th correspondence.

While both the Triad and N3B portions of the Report were mentioned in the letter, it was determined that all processes cited in the letter are processes included within the Triad portion of the Report.

The processes for the following activities are included herein:

- Planetary ball milling for waste reduction in explosives processes
- Copper bioleaching for target development in plasma physics research
- Resonant Acoustic Mixing (RAM) in explosive processing
- Ammonium bifluoride (ABF) used to dissolve post detonation debris
- Solvent recovery system for acetonitrile in High-performance liquid chromatography (HPLC) wastes
- Solvent evaporator system for hexane recovered from wastewater samples

A seventh process was listed within the NMED-HWB request for information; however, it appears to be a duplication of the request for information on the planetary ball milling activity listed above.

Planetary Ball Milling

This activity consists of scientists experimenting with solid-state chemistry using planetary ball milling to address the hazardous waste generated by traditional concentrated acid wet chemistry for high explosive processes. Ball milling is a mechanical technique widely used to grind powders into fine particles and blend materials, but planetary milling is a relatively recent innovation that deposits significantly more energy in an efficient manner, enabling chemical reactions previously inaccessible through traditional colloidal milling techniques. Planetary milling is emerging as an environmentally-friendly, cost-effective technique for world-wide industry. Research into this method will continue in FY 2021 as scale-up can lead to reduced disposal and purchase costs associated with the concentrated acids used in the more traditional process. In addition, workers in high explosives will benefit from being exposed to less hazardous chemicals. As a discovery process, this project has generated

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hazardous waste in the form of failed catalyst attempts in waste stream profile (WSP) 48203, included in Attachment 1 of this response.

Additionally included in Attachment 1 are WSPs 20759, 24245, 39696, 44239, 44612, 45248, and 45710. These profiles document hazardous and nonhazardous waste acids and organic compounds that are generated as part of explosives research, development, and chemical synthesis. The WSPs provide information as to the location and site identification number where hazardous waste is accumulated, which are inspected each year by NMED-HWB personnel. The planetary ball milling activity has eliminated concentrated acid wastes and organic synthesis solvent wastes, similar to the WSPs included in Attachment 1, and the final refined process will not generate catalyst waste (catalysts being reusable).

Lastly, waste container profile W847745 is included in Attachment 1, and includes documentation for nonhazardous wastewater in storage on-site. The wastewater is difficult to ship, as the trace explosives within the waste stream require further approval from the DOE and the U.S. Department of Transportation prior to shipment off-site for disposal.

Copper Bioleaching

Copper leaching for target component preparation using 35% to 50% nitric acid is the primary chemical operation performed by the Materials Science Target Engineering Team for target component preparation. This pollution prevention proposed activity is designed to decrease, or eliminate the quantity of acid utilized for copper leaching.

Target components, specifically, gold hohlraums and epon fabricated spools housing internal aluminum bands machined on copper mandrels are standard components for targets built most recently for plasma physics experiments. Batches of millimeter-sized hohlraums and spools are machined yearly using copper mandrels to support the components during machining. Thus, the deposited copper material becomes integral to the part being fabricated and must ultimately be removed in order to make these components viable and usable for targets.

Over the years, the leaching process to remove the deposited copper has been streamlined towards lower concentrations and shorter leaching times of nitric acid being used. Currently, 35% nitric acid is used to leach the copper from the epon spools and 50% nitric acid is used to leach the copper from the hohlraums. The hohlraum leaching process is extremely effective; however, the epon spool leaching process has its drawbacks.

This activity is using Acidithiobacillus ferrooxidans (an acidophilic iron-oxidizing bacterium), a natural bioleaching microorganism. The bacterium will replace or, at minimum, work in combination with the current nitric acid leaching process for target component preparation. Initially, the focus has been on mitigating the nitric acid leaching of the epon spools. For those spools that still contain small amounts of copper contamination, studies involve exposing the spools to a culture of Acidithiobacillus ferrooxidans and monitoring the effectiveness of leaching the remaining copper from the spools. Computed tomography and scanning electron microscopy techniques will be used to characterize the effectiveness of the microorganism's bioleaching capability. Depending on the success of leaching small amounts of copper, the primary goal is to transition the bioleaching methodology to leach copper from the entire spool and ideally, with no effect on the plastic epon. Finding a more natural, less-hazardous and possibly more effective substitute for nitric acid leaching of copper for target

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components is advantageous for user health and safety in addition to improving the quality of the targets.

WSPs 49344 and 44204 are included in Attachment 2 of this response. WSP 49344 provides documentation as to how the waste generated from the activity will be managed when generated. WSP 44204 provides documentation for the waste that will be reduced or eliminated by the project. The WSPs also provide information as to the location and site identification number where hazardous waste accumulation occurs. Attachment 2 also includes container profiles W849416, W850678, W853362, W858199, and W858200 that document recent shipments of the nitric acid waste off-site for disposal.

Resonant Acoustic Mixing (RAM)

A wet slurry method is utilized to formulate explosives to meet the national security mission. This process generates wastes consisting of hazardous solvents and water. To address the issue, scientists at LANL are working to use resonant acoustic mixing (RAM) technology to eliminate aqueous waste and capture solvents, essentially creating a zero-waste process. Once the RAM method is online, LANL will benefit from reduced disposal and purchase costs associated with the concentrated acids. Also, due to RAM being a sealed system, workers will be exposed to less hazardous chemicals.

WSPs 42360 and 46444 are included in Attachment 3 to this response to document hazardous and nonhazardous wastes currently generated as part of formulating explosives containing solvents. WSP 42360 provides information as to the location and site identification number where hazardous waste accumulated prior to shipment off-site for disposal. Also included in Attachment 3 are waste container profiles W824418, W824459, W847940, W847943, W850988, and W855901. The profiles document movement and off-site shipment of hazardous waste, or movement and the current location of the nonhazardous wastewater that this project will work to reduce. The wastewater is difficult to ship, as the trace explosives within the waste stream require further approval from the DOE and the U.S. Department of Transportation prior to shipment off-site for disposal. Treatment of the wastewater onsite is currently being evaluated as a parallel path.

Dissolving Post-Detonation Debris with Ammonium Bifluoride (ABF)

In the field of nuclear forensic study, one of the biggest challenges is post-detonation debris solubulization. Debris generated after the nuclear detonation is a glassy material that is difficult to dissolve with chemicals. Traditionally, corrosive acids such as nitric acid, hydrofluoric acid, and sulfuric acid, in the most concentrated form, are employed during the dissolution. Often times, the complete dissolution is not warranting. These acids, due to their corrosive nature, are not suitable for in-field/on-site sample preparation operations. Even in the fix-based laboratory, the high concentration of the acids can sometimes exceed the waste acceptance criteria for discharge to the Radiological Liquid Wastewater Treatment Facility for treatment. Waste from excess sample digestion, rinsing glassware and analytical instruments are documented by WSPs 45884, 46089, and 46579, included in Attachment 4. These are aqueous waste streams that are treated at the Radiological Liquid Wastewater Treatment Facility. Any waste exceptions to the waste acceptance criteria must be approved by the treatment facility prior to generation of the waste.

Since FY17, chemists at LANL have been testing a chemical called ammonium bifluoride (ABF, NH4HF2) for its potential application in debris sample preparation. ABF is the active ingredient in car

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wheel cleaner and can be obtained from ordinary hardware stores (although a higher grade/purity is utilized for the trace element analysis described here). Due to its less hazardous chemical properties, ABF has been used as a replacement for hydrofluoric acid, an extremely hazardous chemical, in industry. Scientists have already demonstrated that glass materials/fly ash can be digested when mixed with ABF solid powder and heated at 125 degrees Celsius for a couple of hours. The pellet formed can be completely dissolved in 2M (~10% nitric acid). They have also shown that uranium isotopes and two to three trace elements can be quantified by the inductively coupled plasma-mass spectrometry method. Identification and quantification of actinide isotopes and trace metals provide valuable nuclear forensic signatures in the post-detonation debris. Additional trace elements and more isotopes were evaluated in FY18 and 19, and use of ABF continues to improve procedural safety by decreasing the utilization of large quantities of concentrated, hazardous mineral acid fluxes. More importantly, ABF digestion is safer and faster than using concentrated mineral acids. As referenced in the FY20 Waste Minimization Report, funding did not continue for FY20 or FY21.

Acetonitrile Solvent Recovery System

The process of solvent recovery of acetonitrile in High-performance liquid chromatography (HPLC) equipment has been in use at Technical Area (TA) 35, Building 85 and TA-3, Building 1698 for quite some time. The Solvent Recovery Unit at Technical Area 35, received a Pollution Prevention Award for recovering solvents previously managed and disposed of as hazardous waste. The example WSP (43228) in Attachment 5 of this response was used to document a drum utilized for collection of solvent in the process, the contents of which is recycled by distillation for reuse. In 2019, the WSP was allowed to expire, as it was no longer necessary to hold the solvent for recovery as a hazardous waste prior to recovery. Upon the approval of a Class 1 permit modification to the LANL Hazardous Waste Facility Permit in August 2019, the Permittees were approved for claiming the Resource Conservation and Recovery Act (RCRA) Generator Controlled Exclusion for management of Hazardous Secondary Materials. This excludes Hazardous Secondary Materials that are reclaimed under the control of the generator from the definition of "hazardous waste".

Solvent Evaporator System for Hexane Recovered from Wastewater Samples

The Polychlorinated biphenyl (PCB) screening project has developed "in-house" capabilities to understand concentrations and compositions of PCBs in LANL wastewater flows. During the extraction concentration step in PCB sample processing, Laboratory chemists noticed high amounts of hazardous hexane solvent evaporation and waste generation. In FY18 pollution prevention funding was utilized to purchase a solvent evaporator to reduce hazardous hexane exhaust. After using the Solvent Evaporator, there was a reduced consumption of hexane solvent in addition to a reduction in solvent exhaust. Over a 3 week period of PCB chemical analysis, 2 Liters of hexane was recovered for one reuse as opposed to immediately being disposed of as a hazardous waste. After the second reuse, the hexane solvent is characterized as a hazardous waste.

Because the sample analysis process is not experimental in nature, the standard operating procedure has been included in Attachment 6 along with WSPs 45282, 45283, 45286, and 47579 along with container disposition profiles W854060, W854059, and W859264 that document recent off-site shipments of the wastes generated.

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Attachment 1

Planetary Ball Milling

Waste Stream Profiles 48203, 20759, 24245, 39696, 44239, 44612, 45248, and 45710 and Container Profile W847745



WASTE PROFILE FORM COVER SHEET

48203 PENDING APPROVAL

Waste Characteriza	ation Information
Waste Stream ID:	48203
WPF ID (Legacy):	
Waste Stream Name:	METAL OXIDES USED AS CATALYST
Expiration Date:	
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	
FD4.0	
EPA Source Code:	

Waste Generation Estimates

YEAR	VOLUME
2022	14.00 gal
2021	14.00 gal
2020	14.00 gal



WASTE PROFILE FORM

Referenc	e Number					
WCATS ID	Legacy WPF ID					
48203						

Generator's Z Number 233921		nerator's Name <i>(pri</i> /INDLER, GARY	nt)	WMC's Z Nu 324		WMC's Name (pr BRINER,	rint) PATRICK		Generator's Phone 5056061842
Generator's Mail Stop C926	Waste Ger	nerating Group M-7	Waste	e Stream Tech 40	nical Area	Building 000012	Room 10	5	WMC Phone 5056651354
Waste Accumulation (che	Area rage Area ge Area on (check a lysis	Site No: Site No: Site No: Site No: Site No: Site No: SWMU/AOC No as many as apply) Attack Attack Attack Attack	ned ned ned	Sa Sa Sa	mple No: mple No:	□ Central Accur □ NM Special W □ None of the A □ PCBs Storage □ Rad Staging A □ Rad Storage	/aste .bove e Area Area	Site Site Site	No: No: No: No:
Section 1 - Waste Prevent	ion/Minimi	zation (answer all	questic	ons)					
Can hazard segregation, e	elimination,	or material substitu	tion be	e used?		Yes (provide com	ments)	☑N	0
Can any of the materials in	n the waste	stream be recycled	or reu	used?		Yes (provide com	nments)	☑N	0
Has waste minimization be	en incorpo	rated into procedur	es or o	other process	controls? ☑	Yes		□N	o (provide comments)
Can this waste be generat	ed outside	a RCA?				Yes (provide com	nments)	□N	o ☑ N/A
Comments: Section 2 - Chemical and I	Physical In	oformation							
Waste Type (check only or		iste Category (che	ck all t	that annly)	Waste Sour	ce (check only on	e) I	Naste M	atrix (check only one)
☐ Unused/Unspent Chemi	·	Inorganic	CK an i	riat apply)	Waste Sour			Gas	attix (check only one)
☑ Process Waste/Spent Chemical/Other		Organic Solvent (see instru Degreaser (see in		,	☐ Decon ☐ Materials	s Processing/Prod h/Development/Te	uction	□ ≤1.5 <i>/</i> □ >1.5 <i>/</i>	Atmospheres Pressure
Radiological Information		Dioxin		,		ed Maintenance	J	•	ed Compressed Gas
Was Waste generated in a		Electroplating				eeping - Routine		_iquid	
☐ Yes ☑ No		Treated Hazardou		te or Residue		anup - Routine		☐ Aque	
☑ Non-radioactive		No-Longer Contain Explosive Process			☐ Sampling	g - Routine Monito		□ Non-A	Aqueous ended Solids/Aqueous
☐ Radioactive - Low Leve	·I	Infectious/Medical			□ Other (d	cscribe)			ended Solids/Aqueous ended Solids/Non-
☐ Radioactive - Transurar	nic	Biological						Aque	
Waste Destination (check	(one)	Beryllium			Waste Sour	ce B		Solid	
□swws	· ⊔	Empty Container (☐ Abateme	ent			er/Ash/Dust
□RLWTF		Battery (see instru sbestos	ctions)		ction/Upgrades		☑ Solid	on ton Base
□RLWTP		Friable			☐ Demoliti			☐ Sludg	е
☐ TA-16/HE		Non-Friable			☐ Decon/D	ative Derived		☐ Absor	bed/Solidified Liquid
□NTS		CB Source Conce	ntratio	n	☐ Orphan/			☐ Debri	S
Classified Information		PCB < 50 ppm	\			ation/Restoration	Ī	Matrix T	ype (check only one)
☑ Unclassified		PCB >= 50 - < 500 PCB >= 500 ppm	ppm			ng (secondary)			geneous
☐ Classified/Sensitive		Hazardous Waste	Conta	minated Soil		duled Maintenance	•		ogeneous
		Untreated Hazard				eeping (non-routine) anup (non-routine)	=)		-
		Commercial Solid	Waste			roleum Tanks	'		
		Other [Describe]			☐ Petroleu				
					☐ Other (d	escribe)	Ī	Estimate	Annual Volume (m³):
	Oth	her:			Other:				0.0530

Section 3 - Process and Waste Description

Cotton C 1100000 and Made Docemption
Process Description:
Various metal oxides used in synthesis processes.
Materials are synthesized using solid chemicals
Materials are extracted using liquid chemicals
Materials are formulated using solid and liquid chemicals
Residual solid and liquid chemicals are captured on Kimwipes, gloves, etc. when cleaning out the glassware, etc.
Waste Description:

Section 4 - Characteristics

Section 4 - Characteristics	1							
Ignitability (check only one)	Corrosivity (check only one) (pH)			<i>ne)</i> (pH)	Reactivity (check as many as apply)		Soiling Point (check only one)	
□ < 73 F (< 22.8 C)	□<= 2.	0			☐ RCRA Unstable	□ <= 95	F (<= 35 C)	
□ 73 - 99 F (22.8 - 37.2 C)	□ 2.1 - 4.0				☐ Water Reactive	□ >95 F (> 35 C)		
□ 100 - 139 F (37.8 - 59.4 C)	□4.1 -	6.0			☐ Cyanide Bearing	☑ Not Applicable		
□ 140 - 200 F (60.0 - 99.3 C)	□ 6.1 -				☐ Sulfide Bearing			
□ > 200 (> 99.3 C)	□9.1 -				☐ Pyrophoric			
☐ EPA Ignitable - Non-liquid	□ >= 12				☐ Shock Sensitive			
		z.o d Corrosiv	o to Cto	s.I	☐ Explosive [Specify DOT Div.]			
☐ DOT Flammable Gas			e to stee	31				
☑ DOT Oxidizer	₩ Non-a	aqueous			☑ Non-Reactive			
☐ Not Ignitable								
	_	haracteriz	ation Mat	had	Concentration of Contaminant		T	
	U	Haracteriz	ation wet	None or	Contaminant present at	<u> </u>		
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory Limit	
Toxicity Characteristic Metals	7111		rotai	ivon-acteur	(10,000 ppm = 1%)		, ,	
Arsenic						ppm	5.0 ppm	
Barium						ppm	100.0 ppm	
Cadmium		Π				ppm	1.0 ppm	
Chromium		H	H			ppm	5.0 ppm	
Lead		H				ppm	5.0 ppm	
Mercury		H				ppm	0.2 ppm	
Selenium		H		 				
			片	\vdash		ppm		
Silver			Ш		to	ppm	5.0 ppm	
Toxicity Characteristic Organics					1-		0.5	
Benzene		<u> </u>				ppm	0.5 ppm	
Carbon tetrachloride						ppm	0.5 ppm	
Chlorobenzene						ppm	100.0 ppm	
Chloroform						ppm	6.0 ppm	
Cresol						ppm	200.0 ppm	
p-Cresol						ppm	200.0 ppm	
m-Cresol						ppm	200.0 ppm	
o-Cresol					to	ppm	200.0 ppm	
1,4-Dichlorobenzene					to	ppm	7.5 ppm	
1,2-Dichloroethane					to	ppm	0.5 ppm	
1,1-Dichloroethylene					to	ppm	0.7 ppm	
2,4-Dinitrotoluene					to	ppm	0.13 ppm	
Hexachlorobenzene					to	ppm	0.13 ppm	
Hexachlorobutadiene					to	ppm	0.5 ppm	
Hexachloroethane					to	ppm	3.0 ppm	
Methyl ethyl ketone						ppm	200.0 ppm	
Nitrobenzene						ppm	2.0 ppm	
Pentachlorophenol						ppm	100.0 ppm	
Pyridine						ppm	5.0 ppm	
Tetrachloroethylene						ppm	0.7 ppm	
Trichloroethylene		H	H			ppm	0.5 ppm	
2,4,6-Trichlorophenol						ppm	2.0 ppm	
2,4,5-Trichlorophenol						ppm	400.0 ppm	
Vinvl chloride	<u> </u>	H	H	 		ppm	0.2 ppm	
Herbicides and Pesticides					1 10	Phili	υ.Ζ ρριτι	
Chlordane Pesticides					to	nnm	0.03 ppm	
		무		<u> </u>		ppm	0.03 ppm 10.0 ppm	
2,4-D			무			ppm	10.0 ppm	
Endrin						ppm	0.02 ppm	
Heptachlor (& its epoxide)						ppm	0.008 ppm	
Lindane (gamma-BHC)			무	<u> </u>		ppm	0.4 ppm	
Methoxychlor	<u> </u>	<u> </u>	<u> </u>			ppm	10.0 ppm	
2,4,5-TP (Silvex)						ppm	1.0 ppm	
Toxaphene					to	ppm	0.5 ppm	

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm) Maximum (ppm)					
7631-86-9	Silica, amorphous hydrated	to					
1344-28-1	Aluminum oxide	to					
	Zeolite (ZSM-5)	to					
	Bismuth (III) Oxide	to					
13463-67-7	Titanium dioxide	to					
1309-48-4	Magnesium oxide	to					
	Molybdenum Trioxide	to					
1314-62-1	Vanadium pentoxide	to					
	Zinc Peroxide	to					
	Nickel (II) Oxide	to					
1309-37-1	Red Iron Oxide	to					
	Cobalt (II) Oxide	to					
1212 12 0	Cobalt (II III) Oxide	to					
1313-13-9	Manganese dioxide Chromium (III) Oxide	to to					
1314-23-4	Zirconium oxide	to					
1314-23-4	Tungsten Trioxide	to					
	Tin Oxide	to					
	Yttrium Oxide	to					
	Gadolinium (III) Oxide	to					
1313-97-9	Neodymium oxide	to					
	Samarium (III) Oxide	to					
1317-38-0	Cupric oxide	to					
	Tellurium Oxide	to					
	Celite	to					
	Phosphorus Pentoxide	to					
	Potassium Phosphite	to					
7757-79-1	Potassium nitrate	to					
7631-99-4	Sodium nitrate	to					
	Ammonium Nitrate	to					
	Calcium nitrate tetrahydrate	to					
13446-18-9 7632-00-0	Magnesium nitrate hexahydrate Sodium nitrite	to to					
7032-00-0	Potassium Nitrite	to					
7727-43-7	Barium sulfate	to					
	Kraton G 1650	to					
64741-88-4	Distillates, (petroleum), solvent-refined heavy paraffinic	to					
	Estane 5703	to					
	BDNPA/F	to					
	Irganox 1010	to					
	Sodium hexafluoroaluminate	to					
	1,5 Dihydroxynaphthalene	to					
	Theobromine	to					
	Dinitronaphthalene	to					
	Cabanilide	to					
	4,4'- Sulfonyldiphenol	to					
	Glycouril	to					
	cellulosics (Kimwipes, nitrile gloves)	to 0.00 in 0/					
	Total of max. ranges of this section and page 2	0.00 in %					
	Additional Information						
If additional information	on is available on the chemical, physical, or radiological character of the waste not cover	red on this form, provide it below					
Section 6 - Work Cor	ntrol Documentation						
Do the procedures for this process cover how to manage this waste? ✓ Yes ☐ No (provide comments)							
	or this process address controls to prevent changes to waste constituents and concentra	·					
waste to/from contai							
Comments:							

Section 7 - Packaging and Storage Control Describe how the waste will be packaged in according to the applicable WAC. Identify the storage management controls that will be used for this waste stream: (check all that apply) ☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☐ Other (describe) Section 8 - Waste Certification Statements ☐ Waste appears to meet WAC attachment for: HAZ ☐ Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: Date: Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of

Date:

Date:

Form 1346 (WCATS - R4) WS# 48203

Signature:

Signature:

the applicable WAC.

Attachment 4 - LDR and UHC

		711	acililiciti - - EDIX	and one			
Identify category and presence of any constituents listed below (equal to or above limit). Non-Wastewater/Wastewater Category (check only one)							
	Non Wastewater		CFR 268 2(f)]	☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1		
	fications and Certifications - Check the app			E 245 1 46K [10 61 17 200.2	etiji eigii eerimeatien # 1		
Gen	erator Requirements:						
	This shipment contains hazardous waste conta				Sign Certification #2		
	This shipment contains untreated hazardous de	(No certification)					
	Hazardous wastes (except soil) meeting treatm Hazardous wastes contaminated soil meeting t	Sign Certification #3 Sign Certification #4					
	F or Generator Treatment:	i calificiti sta	ridards at point or	generation	Sign Certification #4		
	TSDF treated hazardous debris meeting the al	Iternative trea	atment standards	of 40 CFR 268.45	Sign Certification #5		
	Generator treated hazardous debris meeting tl				Sign Certification #6		
	Hazardous wastes contaminated soil treated to				Sign Certification #7		
	Wastes or residues from characteristic hazard Wastes or residues from characteristic hazard		•		Sign Certification #8 Sign Certification #9		
	Other TSDF wastes meeting the more stringer				Sign Certification #9 Sign Certification #10		
	Other generator wastes meeting the more strir			•	Sign Certification #11		
	N	otification o	f Underlying Haz	ardous Constituents			
	(Check the applicable underlying cons	tituents abov	e the concentration	n levels for D001 through D043 ch	aracterstic wastes only)		
	lo Underlying Hazardous Constituents in th	is waste str					
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS		
	Organic Constituents			(mg/kg unless noted otherwise)			
	Acenaphthene	83-32-9		3.4	34.0		
	Acetone Acetone	208-96-8 67-64-1	0.059 0.28	-	34.0		
	Acetonitrile	75-05-8		160.0 38.0	1600.0 380.0		
	Acetophenone	98-86-2	0.01	9.7	97.0		
	2-Acetylaminofluorene	53-96-3		140.0	1400.0		
	Acrolein	107-02-8		N/A	N/A		
	Acrylamide	79-06-1	19.0	23.0	230.0		
	Acrylonitrile	107-13-1	0.24	84.0	840.0		
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8		
	Aldrin	309-00-2		0.066	0.66		
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A		
	Aniline	62-53-3		14.0	140.0		
	o-Anisidine	90-04-0		0.66	6.6		
	Anthracene	120-12-7		3.4	34.0		
	Aramite	140-57-8		N/A	N/A		
	alpha-BHC	319-84-6		0.066	0.66		
	beta-BHC	319-85-7	0.00014	0.066	0.66		
	delta-BHC	319-86-8		0.066	0.66		
	Barban	101-27-9	0.056	1.4	14.0		
	Bendiocarb	22781-23-3	0.056	1.4	14.0		
	Benomyl	17804-35-2	0.056	1.4	14.0		
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0		
	Benzal chloride	98-87-3	0.055	6.0	60.0		
	Benzene	71-43-2	0.14	10.0	100.0		
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0		
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0		
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0		
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0		
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0		
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0		
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0		
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0		
	Bromodichloromethane	75-27-4	0.35	15.0	150.0		
	Bromomethane	74-83-9		15.0	150.0		
	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0		
	n-Butyl alchohol	71-36-3		2.6	26.0		
	Butyl benzyl phthalate	85-68-7		28.0	280.0		
	I KUTVIOTO	7002 44 5	(1 (1/17)	1 /	1/10		

☐ Carbaryl

0.14

0.006

63-25-2

1.4

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Carbendazim	10605-21-7	0.056	1.4	14.0
Carbofuran	1563-66-2	0.006	0.14	1.4
Carbofuran phenol	1563-38-8		1.4	14.0
Carbon disulfide	75-15-0	3.8	4.8	48.0
Carbon tetrachloride	56-23-5		6.0	60.0
Carbosulfan	55285-14-8	0.028	1.4	14.0
Chlordane	57-74-9	0.0033	0.26	2.6
p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
p-Chloroaniline	106-47-8	0.46	16.0	160.0
Chlorobenzene	108-90-7	0.057	6.0	60.0
Chlorobenzilate	510-15-6	0.1	N/A	N/A
Chlorodibromomethane	124-48-1	0.057	15.0	150.0
Chloroethane	75-00-3	0.27	6.0	60.0
2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
Chloroform	67-66-3	0.046	6.0	60.0
Chloromethane	74-87-3		30.0	300.0
2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
2-Chlorophenol	95-57-8		5.7	57.0
Chloroprene	126-99-8		0.28	2.8
3-Chloropropylene	107-05-1	0.036	30.0	300.0
Chrysene	218-01-9		3.4	34.0
p-Cresidine	120-71-8		0.66	6.6
m-Cresol	108-39-4	0.77	5.6	56.0
o-Cresol	95-48-7	0.11	5.6	56.0
p-Cresol	106-44-5		5.6	56.0
m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
Cyanide (Total)	57-12-5		590.0	5900.0
Cyclohexanone	108-94-1	0.36	0.75	7.5
2,4-D	94-75-7	0.72	10.0	100.0
o,p'-DDD	53-19-0	_	0.087	0.87
p,p'-DDD	72-54-8		0.087	0.87
o,p'-DDE	3424-82-6		0.087	0.87
p,p'-DDE	72-55-9		0.087	0.87
o,p'-DDT	789-02-6		0.087	0.87
p,p'-DDT	50-29-3		0.087	0.87
Di-n-butyl phthalate	84-74-2		28.0	280.0
Di-n-octyl phthalate	117-84-0		28.0	280.0
Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
Dibenz[a,h]anthracene	53-70-3		8.2	82.0
Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
Dibromomethane	74-95-3	0.11	15.0	150.0
1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
Dichlorodifluoromethane	75-71-8		7.2	72.0
1,1-Dichloroethane	75-71-8		6.0	60.0
1,2-Dichloroethane	107-06-2	0.039	6.0	60.0
1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
2,4-Dichlorophenol	120-83-2	0.054	14.0	140.0
2,6-Dichlorophenol	87-65-0		14.0	140.0
1,2-Dichloropropane	78-87-5		18.0	180.0
trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
cis-1,3-Dichloropropylene	10061-02-6		18.0	
Dieldrin	60-57-1	0.036	0.13	180.0 1.3
Diethyl phthalate	84-66-2	0.017	28.0	280.0
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	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3		28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
	Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8	0.023	0.066	0.66
	Endosulfan II	33213-65-9		0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
	Ethyl acetate	141-78-6		33.0	330.0
	Ethyl benzene	100-41-4	0.057	10.0	100.0
	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7	0.017	15.0	150.0
	Fluoranthene	206-44-0	0.068	3.4	34.0
	Fluorene	86-73-7	0.059	3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8		0.066	0.66
	Heptachlor epoxide	1024-57-3		0.066	0.66
_	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
	Hexachlorobenzene	118-74-1	0.055	10.0	100.0
	Hexachlorobutadiene	87-68-3		5.6	56.0
	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
	Hexachloroethane	67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7	0.035	30.0	300.0
	HxCDDs (All Hayachlorodibenzo-p-dioxins)	34465-46-8		0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
-	Indeno[1,2,3-cd]pyrene Iodomethane	193-39-5 74-88-4	0.0055 0.19	3.4 65.0	34.0
	Isobutyl alcohol	74-66-4 78-83-1	5.6	170.0	650.0 1700.0
	Isodrin	465-73-6		0.066	
	Isosafrole	120-58-1	0.021	2.6	0.66
	Kepone				26.0
	Lindane (gamma-BHC)	143-50-0 58-89-9		0.13 0.066	1.3 0.66
	Mercury (Retort Residues)	7439-97-6*	0.0017 N/A	0.000	2.0
	Methacrylonitrile	126-98-7	0.24	84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methodalb	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.14	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
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	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9		2.3	23.0
	N-Nitrosodiphenylamine	86-30-6		13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
_	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3		5.6	56.0
	2-Naphthylamine	91-59-8		N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0		0.005	0.05
	Oxamyl	23135-22-0		0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2	0.042	1.4	14.0
	Pentachlorobenzene	608-93-5		10.0	100.0
	Pentachloroethane	76-01-7		6.0	60.0
	Pentachloronitrobenzene	82-68-8		4.8	
	Pentachlorophenol	87-86-5		7.4	48.0 74.0
	Phenacetin	62-44-2		16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5		N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0		28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine Physostigmine salicylate	57-47-6	0.056	1.4	
	Promecarb	2631-37-0		1.4	14.0
					14.0
	Pronamide Pronamide	23950-58-5		1.5	15.0
	Prophom Prophom	107-12-0 122-42-9		360.0 1.4	3600.0
	Propham				14.0
	Proposur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9		1.4	14.0
	Pyrene	129-00-0		8.2	82.0
	Pyridine Seferica	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
_	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

20759 APPROVED

Characterization	

 Waste Stream ID:
 20759

 WPF ID (Legacy):
 39634

Waste Stream Name: RESEARCH AND DEVELOPMENT CHEMICAL SYNTHESIS IN SUPPORT OF THE

WEAPONS PROGRAM.

Expiration Date: 09/29/2008

Waste Type: Solid Waste - Other

Radiological Type: Non Radioactive

RCRA Category: RCRA Solid Non-hazardous

Ancillary Types:

Primary Composition: Aqueous Solutions

Composition (other): WATER

EPA Codes:

Waste Acceptance:

EPA Form Code: W219

Organic Liquids: Other organic liquid (specify in comments)

EPA Source Code: G22

Pollution Control and Waste Management Process Residuals: Laboratory analytical

wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR VOLUME 2006 0.10 CM



WASTE PROFILE FORM

Reference Number				
WCATS ID	Legacy WPF ID			
20759	39634			

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone
113513	CHAVEZ, DAVID	093	3700	JIO, GO	ORDON	5056652742
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone
C920	DE-2	09		000021	135	
Waste Accumulation (che ☑ Satellite Accumulation A	Area Site No:	428		☐ Central Accur	Vaste Sit	e No: e No:
Less-than-90 Days Stor	rage Area Site No:			☐ None of the A	sbove Sit	e No:
☐ TSDF Site No: ☐ PCBs Storage Area Site No: ☐ Universal Waste Storage Area Site No: ☐ Rad Staging Area Site No:						e No:
Used Oil for Recycle				☐ Rad Staging /	Area Sit	e No:
ER Use Only						
☐ ER Site	SWMU/AOC No)				
Method of Characterization	on (check as many as apply)					
☐ Chemical/Physical Ana	lysis □ Attacl	ned Sa	ample No:			
☐ Radiological Analysis	☐ Attacl		ample No:			
☐ PCB Analysis	☐ Attacl		ample No:	075 00		
☑ Acceptable Knowledge☐ Material Safety Data St			tation No. WA	STELOG		
	neer (MSDS) — Arraci	ieu				
	ion/Minimization (answer all			11.4		
	elimination, or material substitu			Yes (provide com		No
•	n the waste stream be recycle			Yes (provide com		No
Can this waste be generat	een incorporated into procedu	les of other process		Yes		No (provide comments) No ☑ N/A
	eu outside a NOA!			Yes (<i>provide com</i>	imenis) 🗆	NO ⊻ N/A
Comments:						
Section 2 - Chemical and I						
Waste Type (check only or		eck all that apply)		rce (check only on		Matrix (check only one)
☐ Unused/Unspent Chemi			Waste Soul ☐ Decon	rce A	Gas	
☑ Process Waste/Spent Chemical/Other	☑ Organic □ Solvent (see instru	ictions)		s Processing/Prod		Atmospheres Pressure
Chemical/Other	□ Degreaser (see in			:h/Development/Te		5 Atmospheres Pressure lified Compressed Gas
Radiological Information		,		ed Maintenance		illied Compressed Cas
Was Waste generated in a				eeping - Routine	Liquid	00110
☐ Yes ☐ No	☐ Treated Hazardou			anup - Routine g - Routine Monito	Aqu	eous -Aqueous
☑ Non-radioactive	□ No-Longer Contai □ Explosive Process		Other (d		•	pended Solids/Aqueous
☐ Radioactive - Low Leve	^¹ □ Infectious/Medical		_ = 01.101 (4	0001100)		pended Solids/Non-
☐ Radioactive - Transurar	⊓IC ☐ Biological					eous
Waste Destination (check	one) Beryllium		Waste Soul	rce B	Solid	
□swws	☐ Empty Container (☐ Battery (see instru		☐ Abateme		□Pow	/der/Ash/Dust
□RLWTF	Asbestos	ictions)		ction/Upgrades	□ Soli	d
□RLWTP	☐ Friable		☐ Demoliti☐ Decon/□		□ Slud	dge
☐ TA-16/HE	☐ Non-Friable			ative Derived	☐ Abs	orbed/Solidified Liquid
□NTS	PCB Source Conce	ntration	☐ Orphan/		☐ Deb	ris
Classified Information	——— □ PCB < 50 ppm □ PCB >= 50 - < 500) nnm		ation/Restoration	Matrix	Type (check only one)
☐ Unclassified	□ PCB >= 500 ppm	у ррін		ng (secondary)	☑ Hon	nogeneous
☐ Classified/Sensitive	☐ Hazardous Waste	Contaminated Soil		duled Maintenance eeping (non-routine		erogeneous
	☐ Untreated Hazard		☐ Spill Cle	anup (non-routine))	
	☐ Commercial Solid	vvaste	☐ Non-Pet	roleum Tanks		
	☐ Other [Describe]		☐ Petroleu			
			☐ Other (d	escribe)	Estima	te Annual Volume (m³):
	Other:		Other:			0.1000

Section 3 - Process and Waste Des	Section 3 - Process and Waste Description							
Process Description: RESEARCH AND DEVELOPMENT CHEMICAL SYNTHESIS IN SUPPORT OF THE WEAPONS PROGRAM.								
Waste Description: NON-HAZARDOUS WASTE WHICH INCLUDES WATER AND 3,5-DIMETHYLPYRAZOLE HYDROCHLORIDE.								
Section 4 - Characteristics								
	C = = .!.	vity (che	-11	> (1)	Description (about as many as anni-	Dailina F	Daint (abaal) and	
Ignitability (check only one) ☐ < 73 F (< 22.8 C)		• •	ck offig of	<i>ie)</i> (p⊓)	Reactivity (check as many as apply, ☐ RCRA Unstable	_	Point (check only 5 F (<= 35 C)	y one)
☐ 73 F (< 22.8 C) ☐ 73 - 99 F (22.8 - 37.2 C)	2.1 -				☐ Water Reactive		(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	4.1 -				☐ Cyanide Bearing		pplicable	
□ 140 - 200 F (60.0 - 99.3 C)	☑ 6.1 -				☐ Sulfide Bearing			
□ > 200 (> 99.3 C)	□9.1 -				☐ Pyrophoric			
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive			
☐ DOT Flammable Gas		d Corrosiv	e to Stee	el	Explosive [Specify DOT Div.]			
□ DOT Oxidizer	⊔ Non-a	aqueous			☑ Non-Reactive			
☑ Not Ignitable								
		haracteriz	ation Mot	had	Concentration of Contaminan	to	T	
		Ilaracteriz	ation wet	None or	Contaminant present at	เร	1	
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory	/ Limit
Toxicity Characteristic Metals					(10,000 ppm = 1%) to	nnm	5.0	nnm
Arsenic Barium	-	\vdash	-		to	ppm ppm	100.0	ppm
Cadmium					to	ppm		ppm
Chromium					to	ppm		ppm
Lead					to	ppm	5.0	ppm
Mercury					to	ppm		ppm
Selenium	<u> </u>	<u> </u>		<u> </u>	to	ppm		ppm
Silver Toxicity Characteristic Organics					to	ppm	5.0	ppm
Benzene					to	ppm	0.5	ppm
Carbon tetrachloride					to	ppm		ppm
Chlorobenzene					to	ppm	100.0	
Chloroform					to	ppm		ppm
Cresol					to to	ppm	200.0	
p-Cresol m-Cresol	-	片片	-		to	ppm ppm	200.0 200.0	
o-Cresol	-				to	ppm	200.0	
1,4-Dichlorobenzene					to	ppm		ppm
1,2-Dichloroethane					to	ppm		ppm
1,1-Dichloroethylene			<u> </u>		to	ppm		ppm
2,4-Dinitrotoluene Hexachlorobenzene					to to	ppm ppm	0.13 0.13	
Hexachlorobutadiene					to	ppm		ppm
Hexachloroethane					to	ppm		ppm
Methyl ethyl ketone					to	ppm	200.0	ppm
Nitrobenzene					to	ppm		ppm
Pentachlorophenol					to	ppm	100.0	
Pyridine Tetrachloroethylene					to to	ppm ppm		ppm ppm
Trichloroethylene			-		to	ppm		ppm
2,4,6-Trichlorophenol					to	ppm		ppm
2,4,5-Trichlorophenol					to	ppm		
Vinyl chloride					to	ppm	0.2	ppm
Herbicides and Pesticides	_		_					
Chlordane		 -			to to	ppm	0.03	
2,4-D Endrin					to	ppm ppm	10.0 0.02	
Heptachlor (& its epoxide)					to	ppm	0.008	
Lindane (gamma-BHC)					to	ppm	0.4	ppm
Methoxychlor					to	ppm		
2,4,5-TP (Silvex)					to	ppm		ppm
Toxaphene					to	ppm	0.5	ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm) Maximum (ppm)
7732-18-5	WATER	880000 to	
	3,5-DIMETHYLPYRAZOLE HYDROCHLORIDE [31705-88-1]	80000 to	0 120000
	Total of may represe of this postion and page 2	 	400 00 in 0/
	Total of max. ranges of this section and page 2 Additional Information		106.00 in %
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form prov	vide it helow
ii additional informatio	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, prov	ide it below
Section 6 - Work Cor	atrol Documentation		
· · · · · · · · · · · · · · · · · · ·			
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentration	ns or addition or re	emoval of
	ners? ☑ Yes ☐ No (provide comments)		
Comments:			
	g and Storage Control		
	ste will be packaged in according to the applicable WAC.		
PLASTIC DRUM			
	nanagement controls that will be used for this waste stream: (check all that apply)		
	Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☐ Oth	er (describe)	
	rtification Statements		
☑ Waste appears to i	meet WAC attachment for: SW-OTHER		
	ds exception/exemption for treatment, storage, or disposal.	_	
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Proceedings of the Procedure of the	inciple Associate	Director for
	is [PADWP] for assistance.)	fu that the wests of	haracterization
	irtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certime is correct and that it meets the requirements of the applicable waste acceptance criteria.		
	regulatory agencies and that there are significant penalties for submitting false information		
imprisonment for know	wing violations.		-
Signature: WCATS	APPLICATION (000000) Date: 09/07/06 12:00 A	М	
	Approval: I have reviewed this form and any associated attachments and the characterization		
the requirements of the	urate. I certify, to the best of my knowledge, that the waste characterization information pro	vided by the wast	e generator meets
line requirements of the	ic applicable WAO.		
Signature: WCATS	<u>APPLICATION (000000)</u> Date: <u>09/07/06 12:00 A</u>	M	
PCPA Pavious I have	e reviewed this form and any associated attachments and the characterization information	provided appears	to be complete and
	the best of my knowledge, that the waste characterization information provided by the was		
the applicable WAC.	, 0,	J	,
Signature: TAMMY	WINTERS (120424) Date: 09/29/06 05:14 P	² M	
7,10,107	<u> </u>		
I			

	Attachment 4 - LDR and UHC							
Iden	tify category and presence of any constituents							
Non	-Wastewater/Wastewater Category (check o	nlv one)	(equal to of above	e mmy.				
	Non Wastewater ☐ Wastewater [as de	efined by 40		☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1			
Noti	fications and Certifications - Check the app	ilcable boxe	es					
	Generator Requirements: □ This shipment contains hazardous waste contaminated soil that does not meet treatment standards □ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards □ Hazardous wastes (except soil) meeting treatment standards at point of generation □ Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4							
	F or Generator Treatment:							
	TSDF treated hazardous debris meeting the a				Sign Certification #5			
	Generator treated hazardous debris meeting t Hazardous wastes contaminated soil treated to			ards of 40 CFR 268.45	Sign Certification #6 Sign Certification #7			
_	Wastes or residues from characteristic hazard			reatment standards and LITS	Sign Certification #7			
	Wastes or residues from characteristic hazard				Sign Certification #9			
	Other TSDF wastes meeting the more stringer			S .	Sign Certification #10			
	Other generator wastes meeting the more strii				Sign Certification #11			
				ardous Constituents				
	(Check the applicable underlying cons	tituents abov	e the concentration	n levels for D001 through D043 ch	aracterstic wastes only)			
	lo Underlying Hazardous Constituents in th	is waste str						
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS			
	Organic Constituents				(mg/kg unless noted otherwise)			
	Acenaphthene	83-32-9	0.059	3.4	34.0			
	Acenaphthene Acenaphthylene	83-32-9 208-96-8	0.059 0.059	3.4 3.4	34.0 34.0			
	Acenaphthene Acenaphthylene Acetone	83-32-9 208-96-8 67-64-1	0.059 0.059 0.28	3.4 3.4 160.0	34.0 34.0 1600.0			
	Acenaphthene Acetone Acetonitrile	83-32-9 208-96-8 67-64-1 75-05-8	0.059 0.059 0.28 5.6	3.4 3.4 160.0 38.0	34.0 34.0 1600.0 380.0			
	Acenaphthene Acetone Acetonitrile Acetophenone	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2	0.059 0.059 0.28 5.6 0.01	3.4 3.4 160.0 38.0 9.7	34.0 34.0 1600.0 380.0 97.0			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3	0.059 0.059 0.28 5.6 0.01 0.059	3.4 3.4 160.0 38.0 9.7 140.0	34.0 34.0 1600.0 380.0 97.0 1400.0			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8	0.059 0.059 0.28 5.6 0.01 0.059	3.4 3.4 160.0 38.0 9.7 140.0 N/A	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylonitrile	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylonitrile	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylonitrile Aldicarb sulfone	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylonitrile Aldicarb sulfone Aldrin	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A			
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0	34.0 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite alpha-BHC	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8 319-84-6	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36 0.00014	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A 0.066	34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A 0.66			
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite alpha-BHC beta-BHC	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8 319-84-6 319-85-7	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36 0.00014	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A 0.066 0.066	34.0 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A 0.66 0.66			

Butylate

Carbaryl

Benomyl

Benzene

☐ Benzal chloride

☐ Benzo[a]pyrene

Benz[a]anthracene

☐ Benzo(b)fluoranthene

Benzo[ghi]perylene

Benzo[k]fluoranthene

Bis(2-chloroethyl) ether

Bromodichloromethane

Butyl benzyl phthalate

Bromomethane

n-Butyl alchohol

Bis(2-Chloroethoxy)methane

Bis(2-chloroisopropyl) ether

4-Bromophenyl phenyl ether

Bis(2-ethylhexyl) phthalate

14.0

34.0

60.0

100.0

68.0

34.0

18.0

68.0

72.0

60.0

72.0

280.0

150.0

150.0

150.0

26.0

280.0

14.0

1.4

17804-35-2

56-55-3

98-87-3

71-43-2

205-99-2

50-32-8

191-24-2

207-08-9

111-91-1

111-44-4

117-81-7

75-27-4

74-83-9

101-55-3

71-36-3

85-68-7

63-25-2

2008-41-5

39638-32-9

0.056

0.059

0.055

0.14

0.11

0.061

0.0055

0.11

0.036

0.033

0.055

0.28

0.35

0.11

0.055

5.6

0.017

0.042

0.006

1.4

3.4

6.0

10.0

6.8

3.4

1.8

6.8

7.2

6.0

7.2

28.0

15.0

15.0

15.0

2.6

28.0

1.4

0.14

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8	0.044	5.7	57.0
	Chloroprene	126-99-8	0.057	0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4	0.77	5.6	56.0
	o-Cresol	95-48-7	0.11	5.6	56.0
	p-Cresol	106-44-5	0.77	5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5	1.2	590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7	0.72	10.0	100.0
	o,p'-DDD	53-19-0	0.023	0.087	0.87
	p,p'-DDD	72-54-8	0.023	0.087	0.87
	o,p'-DDE	3424-82-6	0.031	0.087	0.87
	p,p'-DDE	72-55-9	0.031	0.087	0.87
	o,p'-DDT	789-02-6	0.0039	0.087	0.87
	p,p'-DDT	50-29-3	0.0039	0.087	0.87
	Di-n-butyl phthalate	84-74-2	0.057	28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
Form	13.46 (WCATS PA)		winted 2/9/2021 2.	•	Page 5 of 0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3	0.047	28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8	0.023	0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8	0.0028	0.13	1.3
Endrin aldehyde	7421-93-4	0.025	0.13	1.3
Ethyl acetate	141-78-6	0.34	33.0	330.0
Ethyl benzene	100-41-4	0.057	10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
Ethylene oxide	75-21-8	0.12	N/A	N/A
Famphur	52-85-7	0.017	15.0	150.0
Fluoranthene	206-44-0	0.068	3.4	34.0
Fluorene	86-73-7	0.059	3.4	34.0
Fluoride	16984-48-8	35.0	N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
Hexachlorobenzene	118-74-1	0.055	10.0	100.0
Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
lodomethane	74-88-4		65.0	650.0
Isobutyl alcohol	78-83-1	5.6 0.021	170.0	1700.0
Isosafrole	465-73-6 120-58-1	0.021	0.066 2.6	0.66
Kepone	143-50-0		0.13	26.0
Lindane (gamma-BHC)	58-89-9		0.066	1.3 0.66
Mercury (Retort Residues)	7439-97-6*	0.0017 N/A	0.066	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7	0.056	1.4	14.0
Methomyl	16752-77-5	0.036	0.14	14.0
Methoxychlor	72-43-5		0.14	1.4
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1	0.28	33.0	330.0
Methyl methacrylate	80-62-6		160.0	1600.0
 13.46 (WCATS - PA)	00-02-0	U.14		Dogg 6 of 0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3		N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6	0.028	28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5	0.028	13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2	0.042	1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8	0.059	5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0	0.055	28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham	122-42-9		1.4	14.0
Propoxur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9		1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5	0.72	7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

24245 APPROVED

	on Information

 Waste Stream ID:
 24245

 WPF ID (Legacy):
 51725

 Waste Stream Name:
 ACID WASTE

Expiration Date: 08/17/2017

Waste Type: <u>Hazardous Waste</u>
Radiological Type: Non Radioactive

RCRA Category: RCRA Solid Hazardous

Ancillary Types:

Primary Composition: Aqueous Solutions

Composition (other): Sulfuric/Nitric Acid;Water

EPA Codes: D002

Waste Acceptance:

EPA Form Code: W103

Inorganic Liquids: Spent concentrated acid (5% or more)

EPA Source Code: G22

Pollution Control and Waste Management Process Residuals: Laboratory analytical

wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2019	5.00 gal
2018	5.00 gal
2017	5.00 gal
2016	5.00 gal
2015	5.00 gal



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
24245	51725

Generator's Z Number	Waste Generator's Name (p	rint) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone
233159	MANNER, VIRGINIA	217	7511	LEE, JE	EFFREY	5056060045
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone
C920	WX-6	09		000021	137	5052577330
Waste Accumulation (che	eck only one)			□ Central Accur	mulation Area Site	No:
☑ Satellite Accumulation	Area Site No	o: <u>424</u>		□ NM Special W		No:
☐ Less-than-90 Days Sto	rage Area Site No):		☐ None of the A	bove Site	No:
□TSDF	Site No):		☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag):		☐ Rad Staging /	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site inc):		☐ Rad Storage	Area Site	No:
☐ ER Site	SWM11/AOC N	0				
	on (check as many as apply)					
☐ Chemical/Physical Ana	, , , , , , , , , , , , , , , , , , , ,		ample No:			
☐ Radiological Analysis	nysis □ Attac		ample No:			
☐ PCB Analysis	☐ Attac		ample No:			
☑ Acceptable Knowledge				IWD-TA-9-186(U), R		
☑ Material Safety Data S	heet (MSDS) ☑ Attac	ched	See	Documentation for a	all MSDS	
Section 1 - Waste Prevent	ion/Minimization (answer a	l questions)				
Can hazard segregation, e	elimination, or material substi	tution be used?		l Yes (<i>provide com</i>	nments) 🗹 N	0
Can any of the materials in	n the waste stream be recycle	ed or reused?		Yes (provide com	nments) 🗹 N	0
	een incorporated into procedu	ures or other process	controls?	Yes		o (provide comments)
Can this waste be generate	ed outside a RCA?			Yes (provide com	nments) 🗆 N	o ☑ N/A
Comments:						
Section 2 - Chemical and	Physical Information					
Waste Type (check only o	ne) Waste Category (ch	eck all that apply)		rce (check only on	e) Waste N	latrix (check only one)
☐ Unused/Unspent Chem	ical 🗹 Inorganic		Waste Soul	rce A	Gas	
☑ Process Waste/Spent	☐ Organic		Decon			Atmospheres Pressure
Chemical/Other	☐ Solvent (see inst			s Processing/Prod h/Development/Te	ating	Atmospheres Pressure
Radiological Information	□ Degreaser (see i □ Dioxin	istructions)	_	ed Maintenance		ied Compressed Gas
Was Waste generated in a	l –			eeping - Routine	Liquid	
☐ Yes ☑ No	☐ Treated Hazardo	us Waste or Residue		anup - Routine	☑ Aque	
☑ Non-radioactive	□ No-Longer Conta			g - Routine Monito	•	Aqueous
☐ Radioactive - Low Leve	Explosive Proces		☐ Other (d	escribe)		ended Solids/Aqueous
☐ Radioactive - Transurar	nic ☐ Infectious/Medica ☐ Biological	al .			☐ Susp Aque	ended Solids/Non-
Waste Destination (check			Waste Soul	rce B	Solid	ous
□ SWWS	´		☐ Abateme			er/Ash/Dust
□ RLWTF	☐ Battery (see instr	uctions)		ction/Upgrades	☐ Solid	er/Asn/Dust
□RLWTP	Asbestos ☐ Friable		☐ Demoliti		☐ Sludg	IA.
☐ TA-16/HE	□ Friable □ Non-Friable		☐ Decon/□			rbed/Solidified Liquid
□NTS	PCB Source Conc	entration	☐ Investiga	ative Derived	□ Debri	•
<u> </u>	□ PCB < 50 ppm			cegacy ation/Restoration	Matrix T	ype (check only one)
Classified Information	□ PCB >= 50 - < 50			ng (secondary)		geneous
	☐ PCB >= 500 ppm	ı e Contaminated Soil		duled Maintenance	, 1711-4-	ogeneous
✓ Unclassified	l —		Houseke	eeping (non-routing	e)	ogeneous
	│					
✓ Unclassified	☐ Untreated Hazar			anup (non-routine)	,	
✓ Unclassified				roleum Tanks	,	
✓ Unclassified	☐ Commercial Solid		☐ Non-Pet	roleum Tanks m Tanks		e Annual Volume (m³):
✓ Unclassified	☐ Commercial Solid		☐ Non-Pet☐ Petroleu	roleum Tanks m Tanks		e Annual Volume (m³):

Section 3 - Process and Waste Description

Process Description: Acid waste will be generated from the synthesis of specific molecular hydrogen peroxide-based home made explosives (HMEs). The syntheses are for the purpose of further preliminary explosives testing.
Waste Description: The waste stream consists of acid waste containing sulfuric acid, 30% hydrogen peroxide, nitric acid and water. This waste can also contain formic acid, acetic acid, hydrochloric acid, triflic acid, and citric acid. Because of the steps used during the various HME processes, the acid formulations are considerd spent products that could potentialy contain contaminants (Non-RCRA).

providera sperit products that could p	oteritialy	Contain	ontaniii	ants (Non-i	iorory.		
Section 4 - Characteristics							
Ignitability (check only one) < 73 F (< 22.8 C) 73 - 99 F (22.8 - 37.2 C) 100 - 139 F (37.8 - 59.4 C) 140 - 200 F (60.0 - 99.3 C) > 200 (> 99.3 C) □ EPA Ignitable - Non-liquid □ DOT Flammable Gas □ DOT Oxidizer ☑ Not Ignitable	☑ <= 2. □ 2.1 - □ 4.1 - □ 6.1 - □ 9.1 - □ >= 12 □ Liquid	☑ <= 2.0 □ 2.1 - 4.0 □ 4.1 - 6.0 □ 6.1 - 9.0 □ 9.1 - 12.4 □ >= 12.5 □ Liquid Corrosive to Steel			Reactivity (check as many as apply) ☐ RCRA Unstable ☐ Water Reactive ☐ Cyanide Bearing ☐ Sulfide Bearing ☐ Pyrophoric ☐ Shock Sensitive ☐ Explosive [Specify DOT Div.] ☑ Non-Reactive	Boiling Point (check only one) □ <= 95 F (<= 35 C) □ >95 F (> 35 C) ☑ Not Applicable	
	С	haracteriz	ation Me	thod	Concentration of Contaminant	'S	
Identify for all contaminants listed Toxicity Characteristic Metals		TCLP	Total	None or Non-detect	Contaminant present at Minimum Maxiumum (10,000 ppm = 1%)		Regulatory Limit
Arsenic	$\overline{\mathbf{V}}$			$\overline{\mathbf{V}}$	to	ppm	5.0 ppm
Barium	V			<u> </u>	to	ppm	100.0 ppm
Cadmium	Ø			V	to	ppm	1.0 ppm
Chromium	Ø			Ø	to	ppm	5.0 ppm
Lead	\square			✓	to	ppm	5.0 ppm
Mercury	$\overline{\square}$			✓	to	ppm	0.2 ppm
Selenium	\square			\square	to	ppm	1.0 ppm
Silver	\square			$\overline{\mathbf{A}}$	to	ppm	5.0 ppm
Toxicity Characteristic Organics							1
Benzene	☑				to	ppm	0.5 ppm
Carbon tetrachloride	☑				to	ppm	0.5 ppm
Chlorobenzene	<u> </u>	<u> </u>			to	ppm	100.0 ppm
Chloroform	☑				to	ppm	6.0 ppm
Cresol	<u> </u>	<u> </u>		<u> </u>	to	ppm	200.0 ppm
p-Cresol	<u> </u>			<u> </u>	to	ppm	200.0 ppm
m-Cresol					to	ppm	200.0 ppm
o-Cresol	<u> </u>			<u> </u>	to to	ppm	200.0 ppm
1,4-Dichlorobenzene	<u> </u>	┝╫╴			to	ppm	7.5 ppm
1,2-Dichloroethane 1,1-Dichloroethylene	<u> </u>				to	ppm	0.5 ppm 0.7 ppm
2,4-Dinitrotoluene	<u> </u>				to	ppm	0.7 ppm
Hexachlorobenzene	<u> </u>			<u> </u>	to	ppm	0.13 ppm
Hexachlorobutadiene	<u> </u>	H		<u> </u>	to	ppm	0.5 ppm
Hexachloroethane	<u> </u>	ΗH		V	to	ppm	3.0 ppm
Methyl ethyl ketone	<u> </u>			<u> </u>	to	ppm	200.0 ppm
Nitrobenzene	<u> </u>			<u> </u>	to	ppm	2.0 ppm
Pentachlorophenol	<u> </u>			<u> </u>	to	ppm	100.0 ppm
Pyridine	<u> </u>				to	ppm	5.0 ppm
Tetrachloroethylene	<u> </u>			<u> </u>	to	ppm	0.7 ppm
Trichloroethylene	Ø			Ø	to	ppm	0.5 ppm
2,4,6-Trichlorophenol	V			Ø	to	ppm	2.0 ppm
2,4,5-Trichlorophenol	V			V	to	ppm	400.0 ppm
Vinyl chloride	V			V	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	V			V	to	ppm	0.03 ppm
2,4-D	Ø			Ø	to	ppm	10.0 ppm
Endrin	☑				to	ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			Ø	to	ppm	0.008 ppm
Lindane (gamma-BHC)	Ø			<u> </u>	to	ppm	0.4 ppm
Methoxychlor	Ø			<u> </u>	to	ppm	10.0 ppm
2,4,5-TP (Silvex)	<u> </u>			<u> </u>	to	ppm	1.0 ppm
Toxaphene	$\overline{\mathbf{Q}}$			$\overline{\square}$	to	ppm	0.5 ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constituents (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)	Maximum (ppm)				
7664-93-9	Sulfuric acid	100000 to					
7697-37-2	Nitric acid	100000 to					
7732-18-5 64-18-6	Water Formic acid	200000 to					
64-19-7	Acetic acid	10000 to					
7647-01-0	Hydrochloric acid	10000 to					
77-92-9	Citric acid	10000 to					
7722-84-1	Triflic acid Hydrogen peroxide	10000 to					
1122-04-1	Trydrogen peroxide	10000 10	20000				
	Total of may ranges of this section and page 2		117.00 in %				
	Total of max. ranges of this section and page 2 Additional Information		117.00 111 %				
If additional information	on is available on the chemical, physical, or radiological character of the waste not covere	d on this form prov	ide it below				
	ection 4.1 thru 4.4 of TP/IWD-TA9-186 is a general procedure that is typically followed to						
	e non-explosive, therefor non-reactive.	roparo expresivos i	nat gonoratos				
Section 6 - Work Cor	ntrol Documentation						
	or this process cover how to manage this waste?	omments)					
· ·			movel of				
waste to/from contain	or this process address controls to prevent changes to waste constituents and concentrationers? ☑ Yes ☐ No (provide comments)	ons of addition of re	errioval oi				
Comments:							
Section 7 - Packagin	g and Storage Control						
Describe how the wa	ste will be packaged in according to the applicable WAC.						
DOT spec. containier							
Identify the storage m	nanagement controls that will be used for this waste stream: (check all that apply)						
☐ Tamper Indication	Devices $\ \square$ Limited use locks with log-in for waste $\ \square$ Locked cabinet or building $\ \square$ Of	her (describe)					
Section 8 - Waste Certification Statements							
☑ Waste appears to meet WAC attachment for: HAZ							
☐ Waste stream needs exception/exemption for treatment, storage, or disposal.							
	☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)						
Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization							
	m is correct and that it meets the requirements of the applicable waste acceptance criteri						
imprisonment for know	regulatory agencies and that there are significant penalties for submitting false information wing violations	i, including the pos	sibility of fines and				
	_						
Signature: VIRGINI	A MANNER (233159) Date: 08/18/15 03:12	РМ					
_	Approval: I have reviewed this form and any associated attachments and the characterizarate. I certify, to the best of my knowledge, that the waste characterization information page applicable WAC.						
Signature: <u>JEFFRE</u>	Y LEE (217511) Date: 08/18/15 03:38	PM .					
	e reviewed this form and any associated attachments and the characterization information the best of my knowledge, that the waste characterization information provided by the wa		'				
Signature: ROBER	T MOLTER (239137) Date: 08/18/15 06:04	PM					
 							

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Attachment 4 - LDR and UHC	
Identify category and presence of any constituents listed below (equal to or above limit).	
Non-Wastewater/Wastewater Category (check only one)	
☑ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1
Notifications and Certifications - Check the applicable boxes	
Generator Requirements:	
☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards	Sign Certification #2
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards	(No certification)
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation	Sign Certification #3
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation	Sign Certification #4
TSDF or Generator Treatment:	
☐ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45	Sign Certification #5
☐ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45	Sign Certification #6
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49	Sign Certification #7
☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS	Sign Certification #8
☐ Wastes or residues from characteristic hazardous waste treatment not meeting UTS	Sign Certification #9
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed	Sign Certification #10
☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed	Sign Certification #11
Notification of Underlying Hazardous Constituents	
(Check the applicable underlying constituents above the concentration levels for D001 through D043 characteristics)	cterstic wastes only)
☑ No Underlying Hazardous Constituents in this waste stream.	
	Hazardous Soil 10Ys LITS

	☑ No Underlying Hazardous Constituents in this waste stream.							
		Wastewater Non Wastewater Standard		Hazardous Soil 10Xs UTS				
_	Organic Constituents			(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0			
	Acenaphthylene	208-96-8		3.4	34.0			
	Acetone	67-64-1	0.28	160.0	1600.0			
	Acetonitrile	75-05-8		38.0	380.0			
	Acetophenone	98-86-2		9.7	97.0			
	2-Acetylaminofluorene	53-96-3		140.0	1400.0			
	Acrolein	107-02-8		N/A	N/A			
	Acrylamide	79-06-1	19.0	23.0	230.0			
	Acrylonitrile	107-13-1	0.24	84.0	840.0			
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8			
	Aldrin	309-00-2	0.021	0.066	0.66			
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A			
	Aniline	62-53-3	0.81	14.0	140.0			
	o-Anisidine	90-04-0	0.01	0.66	6.6			
	Anthracene	120-12-7	0.059	3.4	34.0			
	Aramite	140-57-8	0.36	N/A	N/A			
	alpha-BHC	319-84-6	0.00014	0.066	0.66			
	beta-BHC	319-85-7	0.00014	0.066	0.66			
	delta-BHC	319-86-8	0.023	0.066	0.66			
	Barban	101-27-9	0.056	1.4	14.0			
	Bendiocarb	22781-23-3	0.056	1.4	14.0			
	Benomyl	17804-35-2	0.056	1.4	14.0			
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0			
	Benzal chloride	98-87-3	0.055	6.0	60.0			
	Benzene	71-43-2	0.14	10.0	100.0			
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0			
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0			
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0			
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0			
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0			
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0			
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0			
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0			
	Bromodichloromethane	75-27-4	0.35	15.0	150.0			
	Bromomethane	74-83-9	0.11	15.0	150.0			
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0			
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0			
	Butyl benzyl phthalate	85-68-7		28.0	280.0			
	Butylate	2008-41-5		1.4	14.0			
	Carbaryl	63-25-2		0.14	1.4			

Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Carbendazim	10605-21-7		1.4	14.0
Carbofuran	1563-66-2	0.006	0.14	1.4
Carbofuran phenol	1563-38-8	0.056	1.4	14.0
Carbon disulfide	75-15-0	3.8	4.8	48.0
Carbon tetrachloride	56-23-5	0.057	6.0	60.0
Carbosulfan	55285-14-8	0.028	1.4	14.0
Chlordane	57-74-9	0.0033	0.26	2.6
p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
p-Chloroaniline	106-47-8	0.46	16.0	160.0
Chlorobenzene	108-90-7	0.057	6.0	60.0
Chlorobenzilate	510-15-6	0.1	N/A	N/A
Chlorodibromomethane	124-48-1	0.057	15.0	150.0
Chloroethane	75-00-3	0.27	6.0	60.0
2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
Chloroform	67-66-3	0.046	6.0	60.0
Chloromethane	74-87-3	0.19	30.0	300.0
2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
2-Chlorophenol	95-57-8		5.7	57.0
Chloroprene	126-99-8		0.28	2.8
3-Chloropropylene	107-05-1	0.036	30.0	300.0
Chrysene	218-01-9	0.059	3.4	34.0
p-Cresidine	120-71-8	0.01	0.66	6.6
m-Cresol	108-39-4		5.6	56.0
o-Cresol	95-48-7		5.6	56.0
p-Cresol	106-44-5		5.6	56.0
m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
Cyanide (Total)	57-12-5		590.0	5900.0
Cyclohexanone	108-94-1	0.36	0.75	7.5
2,4-D	94-75-7		10.0	100.0
o,p'-DDD	53-19-0		0.087	0.87
p,p'-DDD	72-54-8		0.087	0.87
o,p'-DDE	3424-82-6		0.087	0.87
p,p'-DDE	72-55-9		0.087	0.87
o,p'-DDT	789-02-6		0.087	0.87
p,p'-DDT	50-29-3		0.087	0.87
Di-n-butyl phthalate	84-74-2		28.0	280.0
Di-n-octyl phthalate	117-84-0		28.0	280.0
Di-n-propylnitrosamine	621-64-7		14.0	140.0
Dibenz[a,h]anthracene	53-70-3		8.2	82.0
Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
1,2-Dibromoethane	106-93-4		15.0	150.0
Dibromomethane	74-95-3		15.0	150.0
1,4-Dichlorobenzene	106-46-7		6.0	60.0
m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
Dichlorodifluoromethane	75-71-8		7.2	72.0
1,1-Dichloroethane	75-71-8		6.0	60.0
1,2-Dichloroethane	107-06-2		6.0	60.0
1,1-Dichloroethylene	75-35-4		6.0	60.0
trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
2,4-Dichlorophenol	120-83-2		14.0	140.0
2,4-Dichlorophenol	87-65-0		14.0	140.0
·				
1,2-Dichloropropane	78-87-5		18.0	180.0
trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
Dieldrin Diethologie	60-57-1	0.017	0.13	1.3
Diethyl phthalate	84-66-2	0.2	28.0	280.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3	0.047	28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
	WCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8	0.023	0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8	0.0028	0.13	1.3
Endrin aldehyde	7421-93-4	0.025	0.13	1.3
Ethyl acetate	141-78-6	0.34	33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.12	160.0	1600.0
Ethylene oxide	75-21-8	0.14	N/A	N/A
Famphur	52-85-7	0.12	15.0	150.0
Fluoranthene	206-44-0	0.068	3.4	34.0
Fluorene	86-73-7	0.059	3.4	
Fluoride	16984-48-8	35.0	N/A	34.0 N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor (& its epoxide)	1024-57-3	0.0012	0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.000	0.005
·			0.0025	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4 55673-89-7	0.000035	0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran Hexachlorobenzene		0.000035		0.025
Hexachlorobutadiene	118-74-1 87-68-3	0.055	10.0	100.0
		0.055	5.6	56.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
lodomethane	74-88-4		65.0 170.0	650.0
Isobutyl alcohol	78-83-1	5.6		1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7	0.056	1.4	14.0
Methomyl	16752-77-5	0.028	0.14	1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
Methyl methacrylate	80-62-6	0.14	160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5	0.028	13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2	0.042	1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8	0.059	5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9		1.4	14.0
_	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5	0.72	7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0



WASTE PROFILE FORM COVER SHEET

39696 APPROVED

Waste Characterization Information

Waste Stream ID: 39696

WPF ID (Legacy): 56432

Waste Stream Name: DEVELOPMENTAL ENERGETIC MATERIALS

Expiration Date: 02/09/2018

Waste Type: Hazardous Waste

Radiological Type: Non Radioactive

RCRA Category: RCRA Solid Hazardous

Ancillary Types:

Primary Composition: Chemical

Composition (other): organic solvents, water

EPA Codes: D001 F003 F005

Waste Acceptance:

EPA Form Code: W119

Inorganic Liquids: Other inorganic liquid (specify in comments)

EPA Source Code: G22

Pollution Control and Waste Management Process Residuals: Laboratory analytical

wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2019	20.00 L
2018	20.00 L
2017	20.00 L



WASTE PROFILE FORM

Referenc	Reference Number						
WCATS ID	Legacy WPF ID						
39696	56432						

Generator's Z Number Waste Generator's Name (print) WMC's Z Nur			Z Number	- W- 7			Generator's Phone
233159	MANNER, VIRGINIA	MANNER, VIRGINIA 2175			LEE, JEFFREY		
Generator's Mail Stop	Waste Generating Group	e Generating Group Waste Stream Technica			Building Room		VMC Phone
C920	M-7		09	000021	137		5052577330
Waste Accumulation (che	eck only one)	l				O't - N	
☑ Satellite Accumulation A	• /	424		☐ Central Accur			D:
☐ Less-than-90 Days Stor	rage Area Site No		_	☐ None of the A			D:
□ TSDF	Site No	:	_	☐ PCBs Storage			D:
☐ Universal Waste Storag	je Area Site No		_	☐ Rad Staging /	Area	Site No	D:
☐ Used Oil for Recycle	Site No	·	_	☐ Rad Storage	Area	Site No	D:
ER Use Only							
☐ ER Site		D	_				
	on (check as many as apply)						
☐ Chemical/Physical Ana			Sample No:				
☐ Radiological Analysis☐ PCB Analysis	☐ Attac ☐ Attac		Sample No: Sample No:				
☐ Acceptable Knowledge				7 Chemical operation:	s IWD-TAS		
☑ Material Safety Data SI			· ·	e Documentation			
Section 1 - Waste Prevent	ion/Minimization (answer all	auestions)					
	elimination, or material substit			Yes (<i>provide com</i>	nments)	☑ No	
	the waste stream be recycle			Yes (provide com		☑ No	
Has waste minimization be	een incorporated into procedu	res or other prod		Í Yes	,	□ No ((provide comments)
Can this waste be generat	ed outside a RCA?			Yes (provide com	nments)	□No	☑ N/A
Comments:							
Section 2 - Chemical and I	Physical Information						
Waste Type (check only of		eck all that apply	() Waste Sou	rce (check only on	ne) Wa	aste Mat	rix (check only one)
☐ Unused/Unspent Chem		son an inat appry	Waste Sou		Ga		TIX (GITCON GITTY GITC)
☑ Process Waste/Spent	☑ Organic		☐ Decon			l ≤1.5 Atn	nospheres Pressure
Chemical/Other	☑ Solvent (see instr	uctions)	☐ Material	s Processing/Prod	uction		nospheres Pressure
D 11 1 11 6 41	Degreaser (see ir	structions)		ch/Development/Te	4:		l Compressed Gas
Radiological Information	Dioxin			led Maintenance	Lic	quid	
Was Waste generated in a	RCA?	ia Waata ar Baa		eeping - Routine anup - Routine		Aqueous	s
☐ Yes ☑ No	□ No-Longer Conta			g - Routine Monito		l Non-Aqı	
☑ Non-radioactive	V Evplosive Proces		☐ Other (d				ded Solids/Aqueous
☐ Radioactive - Low Leve	□ □ Infectious/Medica		`	,			ded Solids/Non-
☐ Radioactive - Transurar	□ Biological					Aqueous	
Waste Destination (check	one) Beryllium	, , , ,	Waste Sou	rce B	So	lid	
□swws	☐ Empty Container		/ L Abatem			l Powder/	/Ash/Dust
□RLWTF	☐ Battery (see instru Asbestos	ictions)		ction/Upgrades		Solid	
□RLWTP	☐ Friable		☐ Demoliti			Sludge	
☐ TA-16/HE	□ Non-Friable		☐ Decon/[_	ed/Solidified Liquid
□NTS	PCB Source Conce	ntration	☐ Investig	ative Derived Legacy		Debris	, -
Classified Information	——— □ PCB < 50 ppm	_		ation/Restoration	Ma	atrix Tvp	e (check only one)
Classified Information ☑ Unclassified	□ PCB >= 50 - < 50	u ppm		ing (secondary)		l Homoge	
☐ Classified/Sensitive	☐ PCB >= 500 ppm ☐ Hazardous Waste	Contaminated		duled Maintenance	9 15	l Heterog	
	☐ Untreated Hazard		□ ⊓ouseki	eeping (non-routing	e)		22040
	☐ Commercial Solid			anup (non-routine) troleum Tanks	'		
	☐ Other [Describe]		☐ Petroleu				
			☐ Other (d		Es	timate A	nnual Volume (m³):
)				(- /-
	Other:		Other:				

Section 3 - Process and Waste Description									
Process Description: Synthesis of new energetic materials, disposed of as a solution of organic solvent containing <1% energetic materials.									
Waste Description: Organic solvents include: acetone, hexanes, diethyl ether, THF, water, dichloromethane, acetonitrile, methanol, ethanol, toluene and methyl ethyl ketone.									
Section 4 - Characteristics									
	Corroci	vity (char	sk only o	ne) (nH)	Poactivity (check	as many as anniy)	Roiling F	Point (check only	(one)
Ignitability (check only one)		vity (ched	K Offig Of	<i>ie)</i> (pn)	□ RCRA Unstabl	as many as apply)		Point (check only F (<= 35 C)	(one)
☑ < 73 F (< 22.8 C) □ 73 - 99 F (22.8 - 37.2 C)	□ \- 2.1 □ 2.1				☐ Water Reactive	-		(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	<u> </u>				☐ Cyanide Bearin	=		pplicable	
□ 140 - 200 F (60.0 - 99.3 C)	□6.1 -				☐ Sulfide Bearing				
□ > 200 (> 99.3 C)	□9.1 -	12.4			☐ Pyrophoric	,			
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitiv				
☐ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Spe	cify DOT Div.]			
□ DOT Oxidizer	⊔ Non-a	aqueous			☑ Non-Reactive				
☐ Not Ignitable									
	С	haracteriz	ation Met			ition of Contaminant minant present at	s	_	
Identify for all contaminants listed	AK	TCLP	Total	None or Non-detect	Minimum	Maxiumum		Regulatory	Limit
Toxicity Characteristic Metals	,					000 ppm = 1%)			
Arsenic	☑			Ø			ppm		ppm
Barium	<u>a</u>			<u> </u>	+		ppm	100.0	
Cadmium	<u> </u>			<u> </u>			ppm		ppm
Chromium Lead	<u> </u>			<u> </u>			ppm ppm		ppm ppm
Mercury	<u> </u>			<u> </u>	+		ppm		ppm
Selenium	Ø			V			ppm		ppm
Silver	<u> </u>			<u> </u>	t		ppm		ppm
Toxicity Characteristic Organics									
Benzene	<u> </u>						ppm		ppm
Carbon tetrachloride	<u> </u>			<u> </u>			ppm		ppm
Chlorobenzene Chloroform	<u> </u>			<u> </u>			ppm ppm	100.0	ppm
Cresol	Ø			V			ppm	200.0	
p-Cresol	<u> </u>			<u> </u>			ppm	200.0	
m-Cresol	Ø			V	t		ppm	200.0	
o-Cresol	Ø			Ø			ppm	200.0	
1,4-Dichlorobenzene	<u>a</u>			<u> </u>			ppm		ppm
1,2-Dichloroethane	<u> </u>	┝		<u> </u>		0	ppm		ppm
1,1-Dichloroethylene 2.4-Dinitrotoluene	<u> </u>			<u> </u>			ppm ppm	0.7	ppm
Hexachlorobenzene	Ø			V			ppm	0.13	
Hexachlorobutadiene	<u> </u>			<u> </u>			ppm		ppm
Hexachloroethane	V			V	t		ppm		ppm
Methyl ethyl ketone	Ø				20000 t		ppm	200.0	
Nitrobenzene	☑			☑			ppm		
Pentachlorophenol	Ø			Ø			ppm	100.0	
Pyridine Tetrachloroethylene	<u> </u>			<u> </u>			ppm		ppm ppm
Trichloroethylene	<u> </u>			<u> </u>			ppm ppm		ppm
2,4,6-Trichlorophenol	Ø			Ø			ppm		ppm
2,4,5-Trichlorophenol	V			V			ppm	400.0	
Vinyl chloride	4			V	t		ppm		ppm
Herbicides and Pesticides									
Chlordane	<u> </u>			<u> </u>			ppm	0.03	
2,4-D	<u> </u>			<u> </u>			ppm	10.0	
Endrin Heptachlor (& its epoxide)	<u> </u>			<u> </u>	<u> </u>	0 0	ppm ppm	0.02	
Lindane (gamma-BHC)	<u> </u>	-		<u> </u>			ppm		ppm
Methoxychlor	Ø			Ø			ppm	10.0	
2,4,5-TP (Silvex)	Ø			Ø		0	ppm	1.0	ppm
Toxaphene	V			Ø	t	0	ppm	0.5	ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)	Maximum (ppm)					
67-64-1	Acetone	300000 to	400000					
73513-42-5	Hexanes	40000 to	50000					
109-99-9	Tetrahydrofuran	40000 to	50000					
7732-18-5	Water	100000 to	150000					
75-05-8	Acetonitrile	50000 to	100000					
67-56-1 64-17-5	Methanol Ethanol	40000 to	50000 50000					
108-88-3	Toluene	10000 to	20000					
60-29-7	Ethyl ether	40000 to	50000					
75-09-2	Methylene chloride	40000 to	50000					
	Total of max. ranges of this section and page 2		100.00 in %					
	Additional Information							
	on is available on the chemical, physical, or radiological character of the waste not cover	ed on this form, provide	de it below					
No compatibiliy issue	es. Waste is compatible with High Density Polythylene (HDPE) containers.							
Waste as disposed is	s non-explosive, therefore non-reactive, non D003.							
Section 6 - Work Cor	ntrol Documentation							
Do the procedures for	or this process cover how to manage this waste? Yes No (provide	comments)						
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentral ners? ☑ Yes ☐ No (provide comments)	tions or addition or rer	noval of					
Comments:								
Comments.								
Section 7 - Packagin	g and Storage Control							
Describe how the wa	ste will be packaged in according to the applicable WAC. iners							
	e Wasta is compatible with High Density Polythylane (HDDF) containers							
, ,	nanagement controls that will be used for this waste stream: (check all that apply)							
☐ Tamper Indication	Devices $\ \square$ Limited use locks with log-in for waste $\ \square$ Locked cabinet or building $\ \square$ C	Other (describe)						
Section 8 - Waste Certification Statements								
☑ Waste appears to i	meet WAC attachment for: HAZ							
☐ Waste stream need	ds exception/exemption for treatment, storage, or disposal.							
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the s [PADWP] for assistance.)	Principle Associate D	irector for					
information on this for	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I ce im is correct and that it meets the requirements of the applicable waste acceptance criter regulatory agencies and that there are significant penalties for submitting false information wing violations.	ria. I understand that	this information will					
Signature: ANNA G	· ·	R AM						
	Approval: I have reviewed this form and any associated attachments and the character urate. I certify, to the best of my knowledge, that the waste characterization information per applicable WAC.							
Signature: <u>JEFFRE</u>	Y LEE (217511) Date: 02/09/17 11:49	AM						
	e reviewed this form and any associated attachments and the characterization informatic the best of my knowledge, that the waste characterization information provided by the w							
Signature: ROBER	T MOLTER (239137) Date: 02/13/17 06:26	S AM						

Attachment 4 - LDR and UHC

		7110	CHILLETT - EDIX	and one				
lden	tify category and presence of any constituents	listed below	(equal to or above	e limit).				
Non-Wastewater/Wastewater Category (check only one) ☑ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.2(f)] Sign Certification #1								
	fications and Certifications - Check the app				orgin commodulon wi			
Gen	erator Requirements:							
	Γhis shipment contains hazardous waste conta	aminated soil	that does not mee	et treatment standards	Sign Certification #2			
	Γhis shipment contains untreated hazardous d				(No certification)			
	Hazardous wastes (except soil) meeting treatn				Sign Certification #3			
	Hazardous wastes contaminated soil meeting	reatment sta	ndards at point of	generation	Sign Certification #4			
	F or Generator Treatment:	14 411 411	-4	-f 40 CED 200 45	Ciana Contification #F			
	TSDF treated hazardous debris meeting the a Generator treated hazardous debris meeting t				Sign Certification #5 Sign Certification #6			
	Hazardous wastes contaminated soil treated t			alus 01 40 CFT 200.43	Sign Certification #7			
	Wastes or residues from characteristic hazard			reatment standards and UTS	Sign Certification #8			
	Wastes or residues from characteristic hazard				Sign Certification #9			
	Other TSDF wastes meeting the more stringer				Sign Certification #10			
Ц	Other generator wastes meeting the more strip				Sign Certification #11			
	(Check the applicable underlying cons			ardous Constituents	aracteratic wastes only)			
				intevers for boot unough bots cit	aracterstic wastes orny)			
<u></u> и	lo Underlying Hazardous Constituents in th	iis waste str	Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS			
	Organic Constituents	CASRN			(mg/kg unless noted otherwise)			
	Acenaphthene	83-32-9	0.059	3.4	34.0			
	Acenaphthylene	208-96-8	0.059	3.4	34.0			
<u></u>	Acetone	67-64-1	0.28	160.0	1600.0			
<u> </u>	Acetonitrile	75-05-8	5.6	38.0	380.0			
	Acetophenone	98-86-2	0.01	9.7	97.0			
	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0			
	Acrolein	107-02-8	0.29	N/A	N/A			
	Acrylamide	79-06-1	19.0	23.0	230.0			
	Acrylonitrile	107-13-1	0.24	84.0	840.0			
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8			
	Aldrin	309-00-2	0.021	0.066	0.66			
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A			
	Aniline	62-53-3	0.81	14.0	140.0			
	o-Anisidine	90-04-0	0.01	0.66	6.6			
	Anthracene	120-12-7	0.059	3.4	34.0			
	Aramite	140-57-8	0.36	N/A	N/A			
	alpha-BHC	319-84-6	0.00014	0.066	0.66			
	beta-BHC	319-85-7	0.00014	0.066	0.66			
	delta-BHC	319-86-8	0.023	0.066	0.66			
	Barban	101-27-9	0.056	1.4	14.0			
	Bendiocarb	22781-23-3	0.056	1.4	14.0			
	Benomyl	17804-35-2	0.056	1.4	14.0			
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0			
	Benzal chloride	98-87-3	0.055	6.0	60.0			
	Benzene	71-43-2	0.14	10.0	100.0			
_	Benzo(b)fluoranthene	205-99-2	0.14	6.8	68.0			
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0			
_		191-24-2	0.0055	1.8				
	Benzo[ghi]perylene Benzo[k]fluoranthene	207-08-9	0.0035	6.8	18.0			
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	68.0 72.0			
	37							
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0 7.2	60.0			
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055		72.0			
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0			
<u>-</u>	Bromodichloromethane	75-27-4	0.35	15.0	150.0			
	Bromomethane	74-83-9	0.11	15.0	150.0			
<u>-</u>	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0			
<u></u>	n-Butyl alchohol	71-36-3	5.6	2.6	26.0			
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0			
	Butylate	2008-41-5	0.042	1.4	14.0			

□ Carbaryl

1.4

0.14

0.006

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard) (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8	0.044	5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1		6.0	60.0
	o-Dichlorobenzene	95-50-1		6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
ö	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin Diethyl phthelete	60-57-1		0.13	1.3
Form	Diethyl phthalate	84-66-2	U.Z	28.0	280.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3		28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8		0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8	0.0028	0.13	
Endrin aldehyde	7421-93-4	0.0028	0.13	1.3 1.3
Ethyl acetate	141-78-6	0.025	33.0	330.0
,				
Ethyl benzene	100-41-4	0.057	10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
Ethylene oxide	75-21-8	0.12	N/A	N/A
Famphur	52-85-7	0.017	15.0	150.0
Fluoranthene	206-44-0	0.068	3.4	34.0
Fluorene	86-73-7	0.059	3.4	34.0
Fluoride	16984-48-8	35.0	N/A	N/A
Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
Hexachlorobenzene	118-74-1	0.055	10.0	100.0
Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
lodomethane	74-88-4	0.19	65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
	91-80-5	0.081	1.5	15.0
Methapyrilene				
Methogard	2032-65-7	0.056	1.4 0.14	14.0
Methogyablar	16752-77-5	0.028		1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
Methyl methacrylate	80-62-6	0.14	160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Ø	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5	0.028	13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2	0.042	1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8	0.059	5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9	0.055	28.0	280.0
	Physostigmine	57-47-6	0.056	1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5	0.093	1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
	1346 (WCATS - R4)		inted 2/8/2021 2:3		Page 7 of 9

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
	Thiodicarb	59669-26-0	0.019	1.4	14.0
	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
\square	Toluene	108-88-3	0.08	10.0	100.0
	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
	Toxaphene	8001-35-2	0.0095	2.6	26.0
	Triallate	2303-17-5	0.042	1.4	14.0
	Tribromomethane	75-25-2	0.63	15.0	150.0
	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
	Trichloroethylene	79-01-6	0.054	6.0	60.0
	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
	Triethylamine	121-44-8	0.081	1.5	15.0
	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
	Vernolate	1929-77-7	0.042	1.4	14.0
	Vinyl chloride	75-01-4	0.27	6.0	60.0
	Xylene	1330-20-7	0.32	30.0	300.0
	2,4-Xylidine	95-68-1	0.01	0.66	6.6
	Antimony	7440-36-0	1.9	1.15	11.5
	Arsenic	7440-38-2	1.4	5.0	50.0
	Barium	7440-39-3	1.2	21.0	210.0
	Beryllium	7440-41-7	0.82	1.22	12.2
	Cadmium	7440-43-9	0.69	0.11	1.1
	Chromium	7440-47-3	2.77	0.6	6.0
	Lead	7439-92-1	0.69	0.75	7.5
	Mercury	7439-97-6	0.15	0.025	0.25
	Nickel	7440-02-0	3.98	11.0	110.0
	Selenium	7782-49-2	0.82	5.7	57.0
	Silver	7440-22-4	0.43	0.14	1.4
	Thallium	7440-28-0	1.4	0.2	2.0
	Vanadium	7440-62-2	4.3	1.6	16.0
	Zinc	7440-66-6	2.61	4.3	43.0



WASTE PROFILE FORM COVER SHEET

44239 APPROVED

Waste	Characterization	Information
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Waste Stream ID:	44239
WPF ID (Legacy):	
Waste Stream Name:	GENERAL ORGANIC SYNTHESIS OF HIGH EXPLOSIVES
Expiration Date:	06/22/2020
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Chemical
Composition (other):	acetone, organic solvents
EPA Codes:	D001 D035 F003 F005
Waste Acceptance:	
EPA Form Code:	W204
	Organic Liquids: Concentrated halogenated/ non-halogenated solvent mixture
EPA Source Code:	<u>G22</u>
	Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2021	1.00 gal
2020	1.00 gal
2019	1.00 gal
2018	1.00 gal
2017	1.00 gal



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
44239	

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone
231206	LEONARD, PHILIP	169	9004	GONZAL	5056653637	
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone
C920	M-7	09		000021	134	5056658812
Waste Accumulation (che	eck only one)			□ Control Acquir	mulation Arga Site	No:
☑ Satellite Accumulation A		6372		☐ NM Special W		e No: e No:
Less-than-90 Days Stor		0372		☐ None of the A	hove Site	e No:
☐ TSDF	Site No:			☐ PCBs Storage	Site	No:
☐ Universal Waste Storag	e Area Site No:			☐ Rad Staging A		e No:
Used Oil for Recycle				☐ Rad Storage	Area Site	e No:
ER Use Only						
☐ ER Site	SWMU/AOC No)				
Method of Characterization	on (check as many as apply)					
☐ Chemical/Physical Ana	, , , , , , , , , , , , , , , , , , , ,	ned S:	ample No:			
☐ Radiological Analysis	☐ Attacl		ample No:			
☐ PCB Analysis	□ Attacl		ample No:			
☐ Acceptable Knowledge	Documentation ☐ Attacl		tation No:			
☑ Material Safety Data Sh		ned	See	Documentation for I	ist of MSD	
	,					
Section 1 - Waste Preventi	ion/Minimization (answer all	questions)				
	limination, or material substitu		Г	l Yes (<i>provide com</i>	nments) 🗹 🛭	No
	the waste stream be recycle			Yes (<i>provide com</i>		
•	en incorporated into procedu			l Yes		No (provide comments)
Can this waste be generate				Yes (<i>provide com</i>		
Comments:				1 Tes (provide con	inicinis) — i	NO EINA
Comments.						
Section 2 - Chemical and F	Physical Information					
Waste Type (check only or	ne) Waste Category (che	eck all that apply)		rce (check only on	e) Waste I	Matrix (check only one)
☐ Unused/Unspent Chemi	cal Inorganic		Waste Soul	rce A	Gas	
☑ Process Waste/Spent	☑ Organic		☐ Decon		□≤1.5	Atmospheres Pressure
Chemical/Other	☑ Solvent (see instru			s Processing/Prod		Atmospheres Pressure
	Degreaser (see in	structions)	_	h/Development/Te	esting 🗆 Liqui	fied Compressed Gas
Radiological Information	Dioxin			ed Maintenance	Liquid	·
Was Waste generated in a				eeping - Routine		nous.
☐ Yes ☑ No	☐ Treated Hazardou		le ☐ Spill Cleanup - Routine ☐ Aqueous ☐ Sampling - Routine Monitoring ☐ Non-Aqueous			
☑ Non-radioactive	□ No-Longer Contai					•
☐ Radioactive - Low Leve	☐ Explosive Process		☐ Other (d	escribe)		pended Solids/Aqueous
☐ Radioactive - Transurar	l Infectious/Medical					ended Solids/Non-
	□ Biological □ Beryllium		West: O:	D	Aque	eous
Waste Destination (check	one)	see instructions)	Waste Soul		Solid	
□swws	☐ Battery (see instru		☐ Abateme		☐ Pow	der/Ash/Dust
□RLWTF	Asbestos	iotiono)		ction/Upgrades	☐ Solid	I
□RLWTP	☐ Friable		☐ Demoliti☐ Decon/□		☐ Slud	ge
☐ TA-16/HE	□ Non-Friable				☐ Abso	orbed/Solidified Liquid
□NTS	PCB Source Conce	ntration	☐ Orphan/	ative Derived	☐ Debi	ris '
Oleration during the	——— □ PCB < 50 ppm			ation/Restoration	Matriy -	Type (check only one)
Classified Information	□ PCB >= 50 - < 500) ppm		ng (secondary)		
☑ Unclassified	□ PCB >= 500 ppm			duled Maintenance		ogeneous
☐ Classified/Sensitive	☐ Hazardous Waste		☐ Houseke	eeping (non-routine	e) 📗 🔟 Hete	rogeneous
	Untreated Hazard		☐ Spill Cle	anup (non-routine))	
	☐ Commercial Solid	vvaste	☐ Non-Pet	roleum Tanks		
	☐ Other [Describe]		☐ Petroleu			
			☐ Other (d	escribe)	Estimat	e Annual Volume (m³):
	Other:		Othor			0.0038
1	i Omer		Other:		1	0.0038

Section 3 - Process and Waste Description

Process Description:

The waste process is derived from general organic synthesis of high explosives which involves stirring various reagents in organic solvents, filtering off the precipitates, extracting with organic solvents and then rotovapping off solvent for reuse. Most of the waste from this process will come from washing glassware, hence the main component is acetone.

Waste Description:
Waste will consist of Acetone, DMSO, Acetonitrile, DMF, Ethyl Acetate, Hexanes, THF, Methanol, Toluene, 2-propanol, Ethanol, MEK, High Explosive (HMX) and Dissolved Organics.

Section 4 - Characteristics							
Ignitability (check only one)	Corrosi	vity (che	ck only o	ne) (nH)	Reactivity (check as many as ap	n/v) Boiling F	Point (check only one)
☑ < 73 F (< 22.8 C)	□<= 2 i	• (on only o	πο (β. ι)	□ RCRA Unstable		5 F (<= 35 C)
	□ 2.1 - <i>i</i>	•			☐ Water Reactive		F (> 35 C)
☐ 73 - 99 F (22.8 - 37.2 C)	□ 2.1 - <i>i</i>						
□ 100 - 139 F (37.8 - 59.4 C)					☐ Cyanide Bearing	□ NOT A	pplicable
□ 140 - 200 F (60.0 - 99.3 C)	6.1 - 9				☐ Sulfide Bearing		
□ > 200 (> 99.3 C)	9.1 -				☐ Pyrophoric		
□ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive		
☐ DOT Flammable Gas		d Corrosiv	ve to Stee	el	☐ Explosive [Specify DOT Div.]		
☐ DOT Oxidizer	☑ Non-a	aqueous			✓ Non-Reactive		
☐ Not Ignitable							
· ·							
	С	haracteriz	ation Met	hod None or	Concentration of Contamir Contaminant present a		-
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory Limit
Toxicity Characteristic Metals	7.11 \	102	, iotai	iton dotoot	(10,000 ppm = 1%)		
Arsenic	$\overline{\mathbf{A}}$			V	to	ppm	5.0 ppm
Barium	<u> </u>			$\overline{\square}$	to	ppm	100.0 ppm
Cadmium	<u> </u>			<u> </u>	to	ppm	1.0 ppm
Chromium	Ø				to	ppm	5.0 ppm
Lead	Ø			Ø	to	ppm	5.0 ppm
Mercury	<u> </u>	H		<u> </u>	to		
Selenium	<u> </u>				to	ppm	0.2 ppm
	<u> </u>			<u> </u>	to	ppm	1.0 ppm
Silver	<u> </u>				ιο	ppm	5.0 ppm
Toxicity Characteristic Organics					40	n.n.n.	0.5 222
Benzene	<u> </u>		- □		to	ppm	0.5 ppm
Carbon tetrachloride	☑			<u> </u>	to	ppm	0.5 ppm
Chlorobenzene	☑			☑	to	ppm	100.0 ppm
Chloroform	☑			☑	to	ppm	6.0 ppm
Cresol	☑			✓	to	ppm	200.0 ppm
p-Cresol	☑			☑	to	ppm	200.0 ppm
m-Cresol	☑			✓	to	ppm	200.0 ppm
o-Cresol	Ø			✓	to	ppm	200.0 ppm
1,4-Dichlorobenzene	\square			☑	to	ppm	7.5 ppm
1,2-Dichloroethane	Ø			\square	to	ppm	0.5 ppm
1,1-Dichloroethylene	☑			✓	to	ppm	0.7 ppm
2,4-Dinitrotoluene	\square			\square	to	ppm	0.13 ppm
Hexachlorobenzene	Ø			\square	to	ppm	0.13 ppm
Hexachlorobutadiene	$\overline{\mathbf{A}}$				to	ppm	0.5 ppm
Hexachloroethane	$\overline{\Delta}$			$\overline{\checkmark}$	to	ppm	3.0 ppm
Methyl ethyl ketone	$\overline{\Delta}$				20000 to 500	00 ppm	200.0 ppm
Nitrobenzene	$\overline{\checkmark}$			\square	to	ppm	2.0 ppm
Pentachlorophenol	$\overline{\mathbf{A}}$			Ø	to	ppm	100.0 ppm
Pyridine	Ø			$\overline{\Box}$	to	ppm	5.0 ppm
Tetrachloroethylene	Ø	П		\square	to	ppm	0.7 ppm
Trichloroethylene	Ø			<u> </u>	to	ppm	0.5 ppm
2.4.6-Trichlorophenol	<u> </u>			<u> </u>	to	ppm	2.0 ppm
2,4,5-Trichlorophenol	<u> </u>			<u> </u>	to	ppm	400.0 ppm
Vinvl chloride	Ø			Ø	to	ppm	0.2 ppm
Herbicides and Pesticides					10	ррпп	0.2 ppm
	$\overline{\mathbf{A}}$			\square	to	nnm	0.03 ppm
Chlordane	<u> </u>		\vdash	<u> </u>	to	ppm	
2,4-D Endrin	<u> </u>			<u> </u>	to	ppm	10.0 ppm
						ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			<u> </u>	to	ppm	0.008 ppm
Lindane (gamma-BHC)	<u> </u>			<u> </u>	to	ppm	0.4 ppm
Methoxychlor	<u> </u>			<u> </u>	to	ppm	10.0 ppm
2,4,5-TP (Silvex)	Ø			<u> </u>	to	ppm	1.0 ppm
Toxaphene	V			✓	to	ppm	0.5 ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppi	m)	Maximum (ppm)
67-64-1	Acetone	350000	to	400000
67-68-5	Dimethyl Sulfoxide	20000	to	50000
75-05-8	Acetonitrile	20000	to	50000
68-12-2 141-78-6	N,N-Dimethylformamide Ethyl acetate	20000 20000	to to	50000 50000
73513-42-5	Hexanes	20000	to	50000
109-99-9	Tetrahydrofuran	20000	to	50000
67-56-1	Methanol	20000	to	50000
108-88-3	Toluene	20000	to	50000
04.47.5	Isopropyl alcohol	20000	to	50000
64-17-5	Ethanol Dissolved Organics	20000 60000	to to	50000 90000
	High Explosive (HMX)	100	to	9000
	Total of max. ranges of this section and page 2			104.90 in %
	Additional Information			
	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pr	ovide	e it below
This waste is non-ex	plosive, therefore non-reactive, non D003			
No compatibility issu	es. Waste is compatible with High Density Polythylene (HDPE) containers.			
Section 6 - Work Cor	trol Documentation			
Do the procedures for	or this process cover how to manage this waste? Yes No (provide co	mments)		
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentration ners? ☑ Yes ☐ No (provide comments)	ns or addition or	rem	oval of
Comments:				
Section 7 - Packagin	g and Storage Control			
Describe how the wa	ste will be packaged in according to the applicable WAC.			
DOT compliant conta	mor(3)			
	Wasta is compatible with High Density Polythylana (HDDF) containers			
, ,	nanagement controls that will be used for this waste stream: (check all that apply)	(1 11)		
	Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☐ Othe	er (describe)		
	rtification Statements			
☑ Waste appears to r	neet WAC attachment for: HAZ			
☐ Waste stream need	ds exception/exemption for treatment, storage, or disposal.			
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Priss [PADWP] for assistance.)	inciple Associate	e Dir	ector for
	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certif m is correct and that it meets the requirements of the applicable waste acceptance criteria.	,		
be made available to imprisonment for know	regulatory agencies and that there are significant penalties for submitting false information, wing violations.	including the po	ossib	ility of fines and
Signature: PHILIP L	EONARD (231206) Date: 06/22/17 10:41 Al	М		_
	Approval: I have reviewed this form and any associated attachments and the characteriza trate. I certify, to the best of my knowledge, that the waste characterization information prote applicable WAC.			
Signature: <u>JEFFRE</u>	Y LEE (217511) Date: 06/22/17 12:11 PI	М		_
	e reviewed this form and any associated attachments and the characterization information paths the best of my knowledge, that the waste characterization information provided by the wast			
Signature: ROBER	T MOLTER (239137) Date: 06/27/17 07:37 Al	М		_

Attachment 4 - LDR and UHC

Labora		Pakad balan		- 1!!4\					
Identify category and presence of any constituents listed below (equal to or above limit). Non-Wastewater/Wastewater Category (check only one)									
✓ Non Wastewater Under Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.2(f)] Sign Certification #1									
Notifications and Certifications - Check the applicable boxes									
	erator Requirements:								
	Γhis shipment contains hazardous waste conta	aminated soil	that does not mee	et treatment standards	Sign Certification #2				
	Γhis shipment contains untreated hazardous d	(No certification)							
	Hazardous wastes (except soil) meeting treatm				Sign Certification #3				
	☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4								
	F or Generator Treatment:								
	TSDF treated hazardous debris meeting the a				Sign Certification #5				
	Generator treated hazardous debris meeting t			ards of 40 CFR 268.45	Sign Certification #6				
	Hazardous wastes contaminated soil treated to				Sign Certification #7				
	Wastes or residues from characteristic hazard Wastes or residues from characteristic hazard				Sign Certification #8 Sign Certification #9				
	Other TSDF wastes meeting the more stringer				Sign Certification #10				
	Other generator wastes meeting the more strii				Sign Certification #11				
				ardous Constituents					
	(Check the applicable underlying cons	tituents abov	e the concentration	n levels for D001 through D043 ch	aracterstic wastes only)				
□ ^	lo Underlying Hazardous Constituents in th	nis waste sti	ream.						
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS				
	Organic Constituents	CASRN	Standard (mg/L)	(mg/kg unless noted otherwise)	(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9	0.059	3.4	34.0				
	Acenaphthylene	208-96-8	0.059	3.4	34.0				
$\overline{\mathbf{A}}$	Acetone	67-64-1	0.28	160.0	1600.0				
Ø	Acetonitrile	75-05-8	5.6	38.0	380.0				
	Acetophenone	98-86-2		9.7	97.0				
	2-Acetylaminofluorene	53-96-3		140.0	1400.0				
	Acrolein	107-02-8		N/A	N/A				
	Acrylamide	79-06-1		23.0					
	,				230.0				
	Acrylonitrile	107-13-1		84.0	840.0				
	Aldicarb sulfone	1646-88-4		0.28	2.8				
	Aldrin	309-00-2		0.066	0.66				
	4-Aminobiphenyl	92-67-1		N/A	N/A				
	Aniline	62-53-3		14.0	140.0				
	o-Anisidine	90-04-0		0.66	6.6				
	Anthracene	120-12-7		3.4	34.0				
	Aramite	140-57-8	0.36	N/A	N/A				
	alpha-BHC	319-84-6	0.00014	0.066	0.66				
	beta-BHC	319-85-7	0.00014	0.066	0.66				
	delta-BHC	319-86-8	0.023	0.066	0.66				
	Barban	101-27-9	0.056	1.4	14.0				
	Bendiocarb	22781-23-3	0.056	1.4	14.0				
	Benomyl	17804-35-2	0.056	1.4	14.0				
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0				
	Benzal chloride	98-87-3	0.055	6.0	60.0				
	Benzene	71-43-2		10.0	100.0				
	Benzo(b)fluoranthene	205-99-2		6.8	68.0				
	Benzo[a]pyrene	50-32-8		3.4	34.0				
	Benzo[ghi]perylene	191-24-2		1.8	18.0				
	Benzo[k]fluoranthene	207-08-9		6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1		7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0				
	` ,			7.2					
	Bis(2-chloroisopropyl) ether	39638-32-9			72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0				
	Bromodichloromethane	75-27-4		15.0	150.0				
	Bromomethane	74-83-9		15.0	150.0				
_	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0				
	n-Butyl alchohol	71-36-3		2.6	26.0				
	Butyl benzyl phthalate	85-68-7		28.0	280.0				
	Butylate	2008-41-5	0.042	1.4	14.0				

□ Carbaryl

1.4

0.14

0.006

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7		1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
H	o-Cresol	95-48-7		5.6	56.0
		106-44-5		5.6	56.0
	p-Cresol m Cumonyl methylogrhamata	64-00-6		1.4	14.0
	m-Cumenyl methylcarbamate			30.0	
	Cyanide (Amenable)	57-12-5*	0.86 1.2		300.0
	Cyclob even and	57-12-5 108-94-1	0.36	590.0	5900.0
H	Cyclohexanone 2,4-D	94-75-7		0.75	7.5
	o,p'-DDD	53-19-0		0.087	100.0
=				0.087	0.87
	p,p'-DDD	72-54-8			0.87
<u></u>	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT Di-n-butyl phthalate	50-29-3		0.087	0.87
		84-74-2		28.0	280.0
<u></u>	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
므	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
		10061-02-6		18.0	180.0
	trans-1,3-Dichloropropene	10001-02-0	0.000		
	trans-1,3-Dichloropropene cis-1,3-Dichloropropylene	10061-02-6		18.0	180.0
				18.0 0.13	

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
		NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8	0.023	0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8	0.0028	0.13	1.3
	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
	Ethyl acetate	141-78-6	0.34	33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.12	160.0	1600.0
	Ethylene oxide	75-21-8	0.14	N/A	N/A
	Famphur	52-85-7	0.12	15.0	150.0
	Fluoranthene	206-44-0	0.068	3.4	34.0
	Fluorene	86-73-7	0.059	3.4	
	Fluoride	16984-48-8	35.0	N/A	34.0 N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor (& its epoxide)	1024-57-3	0.0012	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.000	0.005
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
	1,2,3,4,0,7,6-пертастногопретисния 1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	
	Hexachlorobenzene			10.0	0.025
	Hexachlorobutadiene	118-74-1 87-68-3	0.055 0.055		100.0
	Hexachlorocyclopentadiene	77-47-4	0.055	5.6 2.4	56.0
	Hexachloroethane			30.0	24.0
	Hexachloropropene	67-72-1	0.055		300.0
		1888-71-7 34465-46-8	0.035	30.0 0.001	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063		0.01
			0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
	lodomethane	74-88-4		65.0 170.0	650.0
	Isobutyl alcohol	78-83-1	5.6 0.021		1700.0
		465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
	Methacrylonitrile	126-98-7	0.24	84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7	0.056	1.4	14.0
	Methomyl	16752-77-5	0.028	0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
☑	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
	Methyl methacrylate	80-62-6	0.14	160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
H	Parathion	56-38-2	0.036	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
H	Pentachloronitrobenzene	82-68-8		4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.089	16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5	N/A N/A	N/A N/A	
	Phorate	298-02-2		4.6	N/A
	Phthalic acid	100-21-0	0.021	28.0	46.0
				28.0	280.0
	Phthalic anhydride	85-44-9			280.0
	Physostigmine policylete	57-47-6		1.4 1.4	14.0
	Physostigmine salicylate	57-64-7	0.056 0.056		14.0
	Promecarb	2631-37-0		1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
F	1346 (WCATS - R4)	n	inted 2/8/2021 2:3	1. 52DM	Page 7 of

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
	Thiodicarb	59669-26-0	0.019	1.4	14.0
	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
\square	Toluene	108-88-3	0.08	10.0	100.0
	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
	Toxaphene	8001-35-2	0.0095	2.6	26.0
	Triallate	2303-17-5	0.042	1.4	14.0
	Tribromomethane	75-25-2	0.63	15.0	150.0
	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
	Trichloroethylene	79-01-6	0.054	6.0	60.0
	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
	Triethylamine	121-44-8	0.081	1.5	15.0
	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
	Vernolate	1929-77-7	0.042	1.4	14.0
	Vinyl chloride	75-01-4	0.27	6.0	60.0
	Xylene	1330-20-7	0.32	30.0	300.0
	2,4-Xylidine	95-68-1	0.01	0.66	6.6
	Antimony	7440-36-0	1.9	1.15	11.5
	Arsenic	7440-38-2	1.4	5.0	50.0
	Barium	7440-39-3	1.2	21.0	210.0
	Beryllium	7440-41-7	0.82	1.22	12.2
	Cadmium	7440-43-9	0.69	0.11	1.1
	Chromium	7440-47-3	2.77	0.6	6.0
	Lead	7439-92-1	0.69	0.75	7.5
	Mercury	7439-97-6	0.15	0.025	0.25
	Nickel	7440-02-0	3.98	11.0	110.0
	Selenium	7782-49-2	0.82	5.7	57.0
	Silver	7440-22-4	0.43	0.14	1.4
	Thallium	7440-28-0		0.2	2.0
	Vanadium	7440-62-2	4.3	1.6	16.0
	Zinc	7440-66-6	2.61	4.3	43.0



WASTE PROFILE FORM COVER SHEET

44612 APPROVED

Waste Characteriza	ation Information
Waste Stream ID:	44612
WPF ID (Legacy):	
Waste Stream Name:	ACID WASTE
Expiration Date:	08/31/2019
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	Sulfuric/Nitric Acid;Water
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	<u>W103</u>
	Inorganic Liquids: Spent concentrated acid (5% or more)
EPA Source Code:	<u>G22</u>
	Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
44612	

Generator's Z Number	Waste Generator's Name (pr	rint) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone			
233159	MANNER, VIRGINIA	MANNER, VIRGINIA 169		GONZAL	ES, PAUL	5056060045			
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone			
C920	M-7	09		000021	137	5056658812			
Waste Accumulation (che	eck only one)								
l <u> </u>	,				nulation Area S	ite No:			
☑ Satellite Accumulation A	Area Site No	424		□ NM Special W	/aste S	ite No:			
☐ Less-than-90 Days Stor ☐ TSDF	age Area Site No	<u> </u>		☐ None of the A☐ PCBs Storage	bove S	ite No: ite No:			
☐ Universal Waste Storag	Site No	·		☐ Rad Staging	Area S	ite No:			
Used Oil for Recycle		·		☐ Rad Storage	Area S	ite No:			
ER Use Only	Site 146				1,04				
☐ ER Site	SWMU/AOC N	D							
	Method of Characterization (check as many as apply)								
	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	ا ا							
☐ Chemical/Physical Ana	lysis □ Attac □ Attac		ample No:						
☐ Radiological Analysis☐ PCB Analysis	☐ Attac		ample No: ample No:						
☐ PCB Allalysis ☐ Acceptable Knowledge		•		Os (see documentation	nn)				
✓ Material Safety Data Sh				Documentation for a					
— Material Calety Bata Ci	100t (MODO) = 7 mas								
Section 1 Wests Proyent	ion/Minimization (answer all	(augationa)							
	elimination, or material substit			Voc (provide com	amonto) E	1 No			
	n the waste stream be recycle			Yes (provide com					
				Yes (provide com		¹ No			
	een incorporated into procedu	res or other process		Yes		No (provide comments)			
Can this waste be generat	ed outside a RCA?		L	Yes (provide com	iments) L	□ No ☑ N/A			
Comments:									
Section 2 - Chemical and I	Physical Information								
Waste Type (check only or		eck all that apply)	Waste Soul	rce (check only on	e) Waste	Matrix (check only one)			
☐ Unused/Unspent Chemi			Waste Soul		Gas	(* * * * * * * * * * * * * * * * * * *			
☑ Process Waste/Spent	☑ Organic		☐ Decon		□≤1	.5 Atmospheres Pressure			
Chemical/Other	☐ Solvent (see instr	uctions)	☐ Material	s Processing/Prod		.5 Atmospheres Pressure			
	□ Degreaser (see ir	structions)	☑ Researd	:h/Development/Te	oting	uified Compressed Gas			
Radiological Information	l			ed Maintenance	Liquid	•			
Was Waste generated in a				eeping - Routine					
☐ Yes ☑ No	☐ Treated Hazardoı			anup - Routine		ueous			
☑ Non-radioactive	□ No-Longer Conta			g - Routine Monito		n-Aqueous			
☐ Radioactive - Low Leve	Explosive Proces		☐ Other (d	escribe)		spended Solids/Aqueous			
☐ Radioactive - Transurar	' ☐ Infectious/Medica	I				spended Solids/Non-			
	☐ Biological ☐ Beryllium		\\\\ 4 - \O	B		ueous			
Waste Destination (check	Empty Container	(see instructions)	Waste Soul		Solid				
□swws	☐ Battery (see instri		☐ Abateme		-	wder/Ash/Dust			
RLWTF	Asbestos		☐ Demoliti	ction/Upgrades	☐ So	lid			
□RLWTP	☐ Friable		☐ Decon/E		□ Slu	ıdge			
☐ TA-16/HE	☐ Non-Friable			ative Derived	□Ab	sorbed/Solidified Liquid			
□NTS	PCB Source Conce	ntration	☐ Orphan/		☐ De	bris			
Clossified Information	——— □ PCB < 50 ppm	_		ation/Restoration	Matrix	Type (check only one)			
Classified Information	□ PCB >= 50 - < 50			ng (secondary)					
☑ Unclassified	□ PCB >= 500 ppm		☐ Unsched	duled Maintenance	· -711-	mogeneous			
☐ Classified/Sensitive	☐ Hazardous Waste		☐ Houseke	eeping (non-routine	∍)	terogeneous			
	☐ Untreated Hazard			anup (non-routine))				
	☐ Commercial Solid	vvaste		roleum Tanks					
	- Other [Describe]		Petroleu						
			☐ Other (d	escribe)	Estim	ate Annual Volume (m³):			
	Other:		Other:						
					1				

Section 3 - Process and Waste Description

Process Description:

Acid waste will be generated from the synthesis of a variety of high explosives, which will sometimes include (but are not limited to) specific molecular hydrogen peroxide-based home made explosives (HMEs). The syntheses are for the purpose of basic research, and further preliminary explosives testing.

Waste Description:

The waste stream consists of acid waste containing High Explosives incuded but not limited to (TATP (triacetone triperoxide), HMTD (hexamethylene triperoxide diamine), MEKP (methyl ethyl ketone peroxide), and ETN (erythritol tetranitrate)). Waste will also include sulfuric acid, 30% hydrogen peroxide, nitric acid and water. This waste can also contain formic acid, acetic acid, hydrochloric acid, triflic acid, and citric acid.

	Section 4 - Characteristics							
	Ignitability (check only one)	Corrosi	vitv (che	ck only o	ne) (pH)	Reactivity (check as many as apply)	Boiling F	oint (check only one)
173-99 F (228-372 C)					-7 (1 /			
100 - 139 F (37.8 - 59.4 C)			-					
□ 140 - 200 F (60 0 - 99.3 C) □ 27 - 200 F (90 0 - 99.3 C) □ 27 - 200 F (90 0 - 99.3 C) □ 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 27 - 200 F (90 0 - 99.3 C) □ 27 - 27 - 27 - 27 - 27 - 27 - 27 - 27								
2 > 20 (> 99.3 C)	l <u> </u>						■ NOt A	pplicable
□ EPA (gintable - Non-liquid □ □ □ □ □ □ □ □ □								
□ DOT Flammable Gas □ □ Liquid Corrosive to Steel □ DOT Oxidiz □ DOT Dix □ DIX		∐ 9.1 - ¹	12.4					
DOTO Tokidger DOTO Price	☐ EPA Ignitable - Non-liquid	□>= 12	2.5					
DOT Oxidizer		Liquid	d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]		
Characterization Method Concentration of Contaminants Contam								
Identify for all contaminants listed AK TCLP Total None or Total: Contaminants None						. 10.1. 1 100001110		
Identify for all contaminants listed Toxicity Characteristic Metals	□ Not ignitable							
Identify for all contaminants listed Toxicity Characteristic Metals								
Identify for all contaminants listed Toxicity Characteristic Metals								
Identify for all contaminants listed Toxicity Characteristic Metals		C	haractoriz	ation Met	hod	Concentration of Contaminant		
Identify for all contaminants listed AK TCLP Total Non-detect Minimum Maximum Toxicity Characteristic Metals			i a a a a a a a a a a a a a a a a a a a	dilon wice			3	1
Toxicity Characteristic Motals	Identify for all contaminants listed	AK	TCLP	Total				Regulatory Limit
Arsenic		741		, iotai	iton dotoot			·
Barium	-	V	П	П	V		ppm	5.0 ppm
Cadmium								
Chromium								
Lead							••	· · · · · · · · · · · · · · · · · · ·
Mercury								
Selenium								1
Silver	Mercury						ppm	3.2 11
Toxicity Characteristic Organics Senzene	Selenium	Ø				to	ppm	1.0 ppm
Benzene	Silver	\square			\square	to	ppm	5.0 ppm
Carbon tetrachloride ☑ □ ☑ to ppm 0.5 ppm Chlorobenzene ☑ □ □ ☑ to ppm 6.0 ppm Chloroform ☑ □ ☑ to ppm 6.0 ppm Cresol ☑ □ □ ☑ to ppm 200.0 ppm P-Cresol ☑ □ □ ☑ to ppm 200.0 ppm o-Cresol ☑ □ □ ☑ to ppm 200.0 ppm 1,4-Dichloroebracene ☑ □ □ ☑ to ppm 200.0 ppm 1,2-Dichloroethane ☑ □ □ ☑ to ppm 0.5 ppm 1,1-Dichloroethylene ☑ □ ☑ to ppm 0.7 ppm 1,2-Dichloroethylene ☑ □ ☑ I 0 ppm 0.7 ppm 1,1-Dichloroethylene ☑ □ □ ☑ I 0	Toxicity Characteristic Organics							
Carbon tetrachloride ☑ □ ☑ to ppm 0.5 ppm Chlorobenzene ☑ □ □ ☑ to ppm 6.0 ppm Chloroform ☑ □ ☑ to ppm 6.0 ppm Cresol ☑ □ □ ☑ to ppm 200.0 ppm P-Cresol ☑ □ □ ☑ to ppm 200.0 ppm o-Cresol ☑ □ □ ☑ to ppm 200.0 ppm 1,4-Dichloroebracene ☑ □ □ ☑ to ppm 200.0 ppm 1,2-Dichloroethane ☑ □ □ ☑ to ppm 0.5 ppm 1,1-Dichloroethylene ☑ □ ☑ to ppm 0.7 ppm 1,2-Dichloroethylene ☑ □ ☑ I 0 ppm 0.7 ppm 1,1-Dichloroethylene ☑ □ □ ☑ I 0		$\overline{\mathbf{A}}$			\square	to	ppm	0.5 ppm
Chloroform		N	П			to		
Chloroform								
Cresol Ø □ Ø to ppm 200.0 ppm p-Cresol Ø □ □ Ø to ppm 200.0 ppm m-Cresol Ø □ □ Ø to ppm 200.0 ppm o-Cresol Ø □ □ Ø to ppm 200.0 ppm 1,4-Dichloroethane Ø □ Ø to ppm 7.5 ppm 1,1-Dichloroethane Ø □ Ø to ppm 0.7 ppm 1,1-Dichloroethylene Ø □ Ø to ppm 0.7 ppm 1,2-Dichloroethylene Ø □ Ø to ppm 0.13 ppm 1,4-Dichloroethylene								1
p-Cresol Ø □ Ø to ppm 200.0 ppm m-Cresol Ø □ □ Ø to ppm 200.0 ppm c-Cresol Ø □ □ Ø to ppm 200.0 ppm 1,4-Dichloroebrace Ø □ Ø to ppm 7.5 ppm 1,2-Dichloroethane Ø □ Ø to ppm 0.5 ppm 1,1-Dichloroethylene Ø □ Ø to ppm 0.7 ppm 2,4-Dinitrotoluene Ø □ Ø to ppm 0.13 ppm Hexachlorobenzene Ø □ Ø to ppm 0.13 ppm Hexachloroethane Ø □ Ø to ppm 0.13 ppm Hexachloroethane Ø □ Ø to ppm 3.0 ppm Methyl ethyl ketone Ø □ Ø to ppm 2.00 ppm Pertachloroethylene Ø								7.7 1.
M-Cresol								
c-Cresol ☑ □ ☑ to ppm 200.0 ppm 1,4-Dichlorobenzene ☑ □ ☑ to ppm 7.5 ppm 1,2-Dichloroethylene ☑ □ □ ☑ to ppm 0.5 ppm 1,1-Dichloroethylene ☑ □ □ ☑ to ppm 0.7 ppm 2,4-Dinitrotoluene ☑ □ □ ☑ to ppm 0.7 ppm 4,4-Dinitrotoluene ☑ □ □ ☑ to ppm 0.13 ppm Hexachlorobenzene ☑ □ □ ☑ to ppm 0.5 ppm Hexachloroethane ☑ □ □ ☑ to ppm 0.5 ppm Hexachloroethylene ☑ □ □ ☑ to ppm 3.0 ppm Methyl ethyl ketone ☑ □ ☑ to ppm 2.0 ppm Nitrobenzene ☑ □ □ ☑ to	 '							
1,4-Dichlorobenzene Image: square squar								
1,2-Dichloroethane ☑ □ ☑ to ppm 0.5 ppm 1,1-Dichloroethylene ☑ □ ☑ to ppm 0.7 ppm 2,4-Dinitrotoluene ☑ □ ☑ to ppm 0.13 ppm Hexachlorobenzene ☑ □ ☑ to ppm 0.13 ppm Hexachlorobutadiene ☑ □ ☑ to ppm 0.5 ppm Methyl ethyl ketone ☑ □ ☑ to ppm 2.00.0 ppm Mitroberzene ☑ □ ☑ U to ppm 2.0 ppm Pyridine ☑								
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Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

7697-37-2 Nitric acid 10000 to 200000 T732-18-5 Water 200000 to 300000 64-18-6 Formic acid 10000 to 50000 64-18-6 Formic acid 10000 to 50000 767-79-7 Acetic acid 10000 to 50000 767-79-10 Hydrochloric acid 10000 to 50000 77-79-90 Citric acid 10000 to 30000 77-79-90 Citric acid 10000 to 30000 77-79-90 Citric acid 10000 to 20000 Trace acid 10000 to 20	CAS No.	Name of constituent	Minimum (ppm)	Maximum (ppr
Additional information Additional informa		Sulfuric acid		400000
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64-19-7 Acetic acid 10000 to 100000 7634-70-10 Hydrochlonic acid 10000 to 100000 77-92-9 Citric acid 10000 to 20000 77-92-9 Citric acid 10000 to 20000 77-92-9 Citric acid 10000 to 20000 77-92-84-1 Hydrogen peroxide 10000 to 20000 10000 to 20000 to 20000 10000 to 20000 to 200				300000
7647-01-0 Hydrochloric acid				
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On the procedures for this process cover how to manage this waste? Yes No (provide comments) To the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of			on and handling)	
Do the procedures for this process address controls to prevent changes to waste constituents and concentrations or addition or removal of				
	Do the procedures fo	or this process address controls to prevent changes to waste constituents and concentrat		moval of

Comments:

Section 7 - Packaging and Storage Control

Describe how the waste will be packaged in according to the applicable	WAC.	
DOT compliant containier		
No compatibility issues Wasta is compatible with High Density Polyathyl	Inna (UDDE) namta	to
Identify the storage management controls that will be used for this waste		
☐ Tamper Indication Devices ☐ Limited use locks with log-in for waste	☑ Locked cabine	et or building
Section 8 - Waste Certification Statements		
☑ Waste appears to meet WAC attachment for: HAZ		
☐ Waste stream needs exception/exemption for treatment, storage, or di	isposal.	
☐ Waste does not meet the criteria for any known TSDF. (DOE approval Weapons Programs [PADWP] for assistance.)	l is required. Conta	ct the office of the Principle Associate Director for
Waste Generator Certification: Based on my knowledge of the waste a information on this form is correct and that it meets the requirements of the made available to regulatory agencies and that there are significant point imprisonment for knowing violations.	he applicable waste	e acceptance criteria. I understand that this information will
Signature: VIRGINIA MANNER (233159)	Date:	08/31/17 03:10 PM
Waste Management Approval: I have reviewed this form and any associate complete and accurate. I certify, to the best of my knowledge, that the the requirements of the applicable WAC.		
Signature: <u>JEFFREY LEE (217511)</u>	Date:	08/31/17 03:19 PM
RCRA Review: I have reviewed this form and any associated attachmen accurate. I certify, to the best of my knowledge, that the waste character the applicable WAC.		
Signature: ROBERT MOLTER (239137)	Date:	09/11/17 03:27 PM

Attachment 4 - LDR and UHC

Attachinent 4 - LDR and Onc							
Identify category and present	ce of any constituents listed below (equal to or above li	mit).					
Non-Wastewater/Wastewat	er Category (check only one)						
☑ Non Wastewater	☐ Wastewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1				
Notifications and Certificat	tions - Check the appilcable boxes						
Generator Requirements:							
☐ This shipment contains h	azardous waste contaminated soil that does not meet t	reatment standards	Sign Certification #2				
☐ This shipment contains u	intreated hazardous debris to be treated to 40 CFR 268	.45 treatment standards	(No certification)				
☐ Hazardous wastes (exce	pt soil) meeting treatment standards at point of generat	ion	Sign Certification #3				
☐ Hazardous wastes conta	minated soil meeting treatment standards at point of ge	neration	Sign Certification #4				
TSDF or Generator Treatm	ent:						
☐ TSDF treated hazardous	s debris meeting the alternative treatment standards of	40 CFR 268.45	Sign Certification #5				
☐ Generator treated hazar	dous debris meeting the alternative treatment standard	s of 40 CFR 268.45	Sign Certification #6				
☐ Hazardous wastes conta	aminated soil treated to 40 CFR 268.49		Sign Certification #7				
☐ Wastes or residues from	n characteristic hazardous waste treatment meeting trea	tment standards and UTS	Sign Certification #8				
☐ Wastes or residues from	characteristic hazardous waste treatment not meeting	UTS	Sign Certification #9				
☐ Other TSDF wastes mee	eting the more stringent 40 CFR 268.40 treatment stand	lards to be land disposed	Sign Certification #10				
☐ Other generator wastes	meeting the more stringent 40 CFR 268.40 treatment s	tandards to be land disposed	Sign Certification #11				
	Notification of Underlying Hazard	lous Constituents					
(Check the applied	cable underlying constituents above the concentration le	evels for D001 through D043 characte	erstic wastes only)				

✓V	No Underlying Hazardous Constituents in this waste stream.								
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS				
_	Organic Constituents				(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0				
<u> </u>	Acenaphthylene	208-96-8		3.4	34.0				
	Acetone	67-64-1		160.0	1600.0				
<u></u>	Acetonitrile	75-05-8		38.0	380.0				
	Acetophenone	98-86-2		9.7	97.0				
	2-Acetylaminofluorene	53-96-3		140.0	1400.0				
	Acrolein	107-02-8		N/A	N/A				
	Acrylamide	79-06-1		23.0	230.0				
	Acrylonitrile	107-13-1	0.24	84.0	840.0				
	Aldicarb sulfone	1646-88-4		0.28	2.8				
	Aldrin	309-00-2	0.021	0.066	0.66				
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A				
	Aniline	62-53-3	0.81	14.0	140.0				
	o-Anisidine	90-04-0	0.01	0.66	6.6				
	Anthracene	120-12-7		3.4	34.0				
	Aramite	140-57-8	0.36	N/A	N/A				
	alpha-BHC	319-84-6	0.00014	0.066	0.66				
	beta-BHC	319-85-7	0.00014	0.066	0.66				
	delta-BHC	319-86-8	0.023	0.066	0.66				
	Barban	101-27-9	0.056	1.4	14.0				
	Bendiocarb	22781-23-3	0.056	1.4	14.0				
	Benomyl	17804-35-2	0.056	1.4	14.0				
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0				
	Benzal chloride	98-87-3	0.055	6.0	60.0				
	Benzene	71-43-2	0.14	10.0	100.0				
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0				
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0				
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0				
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0				
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0				
	Bromodichloromethane	75-27-4	0.35	15.0	150.0				
	Bromomethane	74-83-9	0.11	15.0	150.0				
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0				
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0				
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0				
	Butylate	2008-41-5	0.042	1.4	14.0				
	Carbaryl	63-25-2		0.14	1.4				

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7		5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9		3.4	34.0
_	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	
	o-Cresol	95-48-7		5.6	56.0
_					56.0
<u>-</u>	p-Cresol	106-44-5		5.6	56.0
<u></u>	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
<u>_</u>	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
<u></u>	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1		6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
一	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1		0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
	13.46 (WCATS PA)	04-00-2	U.Z		Dags 7 of 11

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3		28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7		N/A	N/A
	Disulfoton	298-04-4		6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4		1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9		0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
	Ethyl acetate	141-78-6		33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7		160.0	1600.0
	Ethyl methacrylate	97-63-2		160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8		0.066	0.66
	Heptachlor epoxide	1024-57-3		0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
	Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
		87-68-3 77-47-4		5.6	56.0
	Hexachlorocyclopentadiene Hexachloroethane	67-72-1	0.057 0.055	2.4 30.0	24.0
		1888-71-7		30.0	300.0
	Hexachloropropene HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	300.0
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
	lodomethane	74-88-4		65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
	Methanol	67-56-1		0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
$\overline{}$	13.46 (WCATS PA)		winted 2/9/2021 2.	-	Page 9 of

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3		N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6	0.028	28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5	0.028	13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2	0.042	1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8	0.059	5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0	0.055	28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham	122-42-9		1.4	14.0
Propoxur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9		1.4	14.0
 Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5	0.72	7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0



WASTE PROFILE FORM COVER SHEET

45248 APPROVED

Waste Characterization	Information
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Waste Stream ID:	45248
WPF ID (Legacy):	
Waste Stream Name:	DEVELOPMENTAL ENERGETIC MATERIALS
Expiration Date:	05/13/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Chemical
Composition (other):	organic solvents, water
EPA Codes:	D001 F002 F003 F005
Waste Acceptance:	
EPA Form Code:	W119
	Inorganic Liquids: Other inorganic liquid (specify in comments)
EPA Source Code:	G22

Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2022	20.00 L
2021	20.00 L
2020	20.00 L



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
45248	

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone		
114183	RODRIGUEZ, JOSEPH	RODRIGUEZ, JOSEPH 16900		GONZALES, PAUL		5056653009		
Generator's Mail Stop H834	Waste Generating Group M-7	Waste Stream Tec	hnical Area	Building 000021	Room 137	WMC Phone 5056658812		
Waste Accumulation (che	eck only one)			П Самия! A		No:		
☑ Satellite Accumulation // □ Less-than-90 Days Stor □ TSDF □ Universal Waste Storag □ Used Oil for Recycle ER Use Only □ ER Site	Area Site No: rage Area Site No: Site No: Site No: Site No: Site No:	424		□ Central Accur □ NM Special W □ None of the A □ PCBs Storage □ Rad Staging A □ Rad Storage	Vaste Site shove Site Area Site	No: No: No: No: No:		
	☐ ER Site SWMU/AOC No							
□ Chemical/Physical Ana □ Radiological Analysis □ PCB Analysis ☑ Acceptable Knowledge ☑ Material Safety Data S	llysis ☐ Attacl	ned Sa hed Sa hed Documen		D-TA9-2309/Page 13- e Documentation	-16, steps			
Section 1 - Waste Prevent	ion/Minimization (answer all	auestions)						
	elimination, or material substitu		Г	l Yes (<i>provide com</i>	nments) 🗹 N	0		
	n the waste stream be recycle			Yes (<i>provide com</i>				
•	een incorporated into procedu			l Yes		o (provide comments)		
Can this waste be generat	ed outside a RCA?	-		Yes (provide com				
Comments:	Dhysical Information							
Section 2 - Chemical and Waste Type (check only o		ack all that annly)	Wasta Sau	rce (check only on	a) Wasto M	atrix (check only one)		
☐ Unused/Unspent Chem		еск ан итак аррту)	Waste Soul		Gas	atrix (check only one)		
☑ Process Waste/Spent Chemical/Other	✓ Organic ✓ Organic ✓ Solvent (see instru			s Processing/Prod h/Development/Te	uction	Atmospheres Pressure		
Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive ☐ Radioactive - Low Leve ☐ Radioactive - Transural	RCA? Dioxin RCA? Electroplating Treated Hazardou No-Longer Contai Explosive Process	is Waste or Residue ned-In	☐ Schedul ☐ Houseke ☐ Spill Cle	ed Maintenance eeping - Routine anup - Routine g - Routine Monito	Liquid □ Aqued ring ☑ Non-A	Aqueous ended Solids/Aqueous ended Solids/Non-		
Waste Destination (check	— Damilium		Waste Soul	rce B	Solid	Jus		
□ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified □ Classified/Sensitive	□ Empty Container (□ Battery (see instruates instruction instr	ntration O ppm Contaminated Soil	☐ Abateme ☐ Construc ☐ Demoliti ☐ Decon/□ ☐ Investiga ☐ Orphan/ ☐ Remedia ☐ Repacki ☐ Unschec ☐ Houseke	ent ction/Upgrades on Decom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance	☐ Powd☐ Solid☐ Sludg☐ Absol☐ Debris Matrix T;☐ Homo	bed/Solidified Liquid		
	☐ Commercial Solid ☐ Other [Describe] Other:					e Annual Volume (m³):		
	I Ouici.		I Ouici.					

Section 3 - Process and Waste Des	cription								
Process Description: Synthesis of new energetic materials	, dispose	d of as a	solution o	of organic so	olvent containing	<1% energetic mate	erials.		
Waste Description: Organic solvents include: acetone, he	exanes, d	iethyl eth	er, THF,	water, dichl	oromethane, acet	tonitrile, methanol, o	ethanol, toli	uene and methyl	ethyl
ketone.									
Section 4 - Characteristics									
Ignitability (check only one)	Corrosi	vity (ched	ck only o	ne) (pH)	Reactivity (chec	k as many as apply) Boiling F	Point (check only	v one)
☑ < 73 F (< 22.8 C)	□<= 2.		,	-7 (1 /	☐ RCRA Unstab		□<=95	5 F (<= 35 C)	,,
☐ 73 - 99 F (22.8 - 37.2 C)	2.1 -				☐ Water Reactiv			(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	☑ 4.1 -				☐ Cyanide Bear		☐ Not A	pplicable	
□ 140 - 200 F (60.0 - 99.3 C) □ > 200 (> 99.3 C)	□ 6.1 - 1 □ 9.1 -				☐ Sulfide Bearir☐ Pyrophoric	ng			
☐ EPA Ignitable - Non-liquid	□ 9.1 - □ >= 12				☐ Shock Sensiti	ve			
□ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Sp				
☐ DOT Oxidizer		aqueous			✓ Non-Reactive				
☐ Not Ignitable									
	C	haracteriz	ation Met	None or		ration of Contaminar aminant present at	its	-	
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum	Maxiumum		Regulatory	/ Limit
Toxicity Characteristic Metals				I 17	(10	1,000 ppm = 1%) to	nnm	5.0	nnm
Arsenic Barium	<u> </u>			<u> </u>		to	ppm ppm	100.0	ppm
Cadmium	<u> </u>			Ø		to	ppm		ppm
Chromium	Ø					to	ppm		ppm
Lead	<u> </u>			<u> </u>		to	ppm		ppm
Mercury Selenium	<u> </u>		뮤	<u> </u>		to to	ppm		ppm
Silver	<u> </u>			<u> </u>		to	ppm ppm		ppm ppm
Toxicity Characteristic Organics					l		PP	0.0	<u> </u>
Benzene	V			Ø		to	ppm		ppm
Carbon tetrachloride	<u> </u>			☑		to	ppm		ppm
Chlorobenzene Chloroform	<u> </u>			<u> </u>		to	ppm ppm	100.0	ppm
Cresol	Ø			Ø		to	ppm	200.0	
p-Cresol	V			Ø		to	ppm	200.0	
m-Cresol	<u> </u>			☑		to	ppm	200.0	•
o-Cresol 1.4-Dichlorobenzene	<u> </u>			<u> </u>		to	ppm ppm	200.0	ppm ppm
1,2-Dichloroethane	<u> </u>		H	V		to	ppm		ppm
1,1-Dichloroethylene	V			<u> </u>		to	ppm	0.7	
2,4-Dinitrotoluene	Ø			☑		to	ppm		ppm
Hexachlorobenzene Hexachlorobutadiene	<u> </u>			<u> </u>		to	ppm		ppm
Hexachloroethane	<u> </u>		-	<u> </u>		to	ppm ppm		ppm ppm
Methyl ethyl ketone	<u> </u>				20000			200.0	
Nitrobenzene	Ø					to	ppm	2.0	ppm
Pentachlorophenol	Ø			Ø		to	ppm		
Pyridine Tetrachloroethylene	<u> </u>			<u> </u>		to	ppm ppm		ppm ppm
Trichloroethylene	<u> </u>		-	V		to	ppm		ppm
2,4,6-Trichlorophenol	<u> </u>			<u> </u>		to	ppm		ppm
2,4,5-Trichlorophenol	Ø			Ø		to	ppm		
Vinyl chloride Herbicides and Pesticides	$\overline{\mathbf{A}}$			V		to	ppm	0.2	ppm
Chlordane	V			V		to	ppm	0.03	nnm
2,4-D	<u>V</u>		<u> </u>	<u>V</u>		to	ppm		ppm
Endrin	$\overline{\mathbf{A}}$			V		to	ppm	0.02	ppm
Heptachlor (& its epoxide)	<u> </u>			<u> </u>		to	ppm	0.008	
Lindane (gamma-BHC) Methoxychlor	<u> </u>			<u> </u>		to to	ppm ppm	10.0	ppm ppm
2,4,5-TP (Silvex)	<u>V</u>			<u> </u>		to	ppm		ppm
Toxaphene	<u> </u>			<u> </u>		to	ppm		ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppr	m) Maximum (ppm)					
67-64-1	Acetone	300000	to 400000					
73513-42-5	Hexanes		to 50000					
109-99-9	Tetrahydrofuran Water	40000	to 50000 to 150000					
7732-18-5 75-05-8	Water Acetonitrile	100000 50000	to 150000 to 100000					
67-56-1	Methanol	40000	to 50000					
64-17-5	Ethanol	40000	to 50000					
108-88-3	Toluene	10000	to 20000					
60-29-7	Ethyl ether	40000	to 50000					
75-09-2	Methylene chloride	40000	to 50000					
	Total of max. ranges of this section and page 2		100.00 in %					
	Additional Information		100.00 111 70					
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pro	ovide it below					
	es. Waste is compatible with High Density Polythylene (HDPE) containers.	•						
Waste is non-explosi	ve, therefore non-reactive, non-RCRA-D003 reactive and non-DOT Hazard Class 1 explos	sive.						
Section 6 - Work Cor	trol Documentation							
Do the procedures for	or this process cover how to manage this waste?	mments)						
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentrationers?	ns or addition or	removal of					
Comments:								
Section 7 - Packagin	g and Storage Control							
Describe how the wa	ste will be packaged in according to the applicable WAC. iner(s)							
·								
	Naste is compatible with High Density Polythylene (HDPE) containers nanagement controls that will be used for this waste stream: (check all that apply)							
, ,	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Oth	er (describe)						
·	5	ici (describe)						
Section 8 - Waste Certification Statements Waste appears to meet WAC attachment for: HAZ								
- ''	ds exception/exemption for treatment, storage, or disposal.							
☐ Waste does not me	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the P	rinciple Associate	e Director for					
Waste Generator Ce	s [PADWP] for assistance.) rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certi							
be made available to	information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.							
Signature: JOSEPH	## Date: 05/13/20 08:37 F	M						
	Approval: I have reviewed this form and any associated attachments and the characterization arate. I certify, to the best of my knowledge, that the waste characterization information prote applicable WAC.							
Signature: PAUL G	ONZALES (169004) Date: 05/18/20 09:41 A	М						
	e reviewed this form and any associated attachments and the characterization information the best of my knowledge, that the waste characterization information provided by the was							
Signature: ANDY E	LICIO (118692) Date: 05/18/20 10:28 A	M						

Attachment 4 - LDR and UHC

		711	acininent + - EDIX						
	tify category and presence of any constituents -Wastewater/Wastewater Category (check of		(equal to or abov	e limit).					
	Non Wastewater		CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1				
	fications and Certifications - Check the app				-(//				
Gen	erator Requirements:								
	This shipment contains hazardous waste conta	aminated soil	that does not me	et treatment standards	Sign Certification #2				
	Γhis shipment contains untreated hazardous d	(No certification)							
	Hazardous wastes (except soil) meeting treatm				Sign Certification #3				
	☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4								
	F or Generator Treatment:	Itarnativa tra	atmost atandarda	of 40 CED 269 45	Sign Contification #E				
П	TSDF treated hazardous debris meeting the a Generator treated hazardous debris meeting t	he alternative	aimeni sianuaius • treatment standa	ords of 40 CFR 268 45	Sign Certification #5 Sign Certification #6				
	Hazardous wastes contaminated soil treated t			3143 31 43 31 17 230.40	Sign Certification #7				
	Wastes or residues from characteristic hazard			reatment standards and UTS	Sign Certification #8				
	Wastes or residues from characteristic hazard	ous waste tre	eatment not meeti	ng UTS	Sign Certification #9				
	Other TSDF wastes meeting the more stringer				Sign Certification #10				
ш	Other generator wastes meeting the more strip				Sign Certification #11				
	(Check the applicable underlying cons			ardous Constituents on levels for D001 through D043 ch	aracterstic wastes only)				
				mrievels for boot amough bots en	aractersite wastes orny)				
<i>r</i>	lo Underlying Hazardous Constituents in th	iis waste sti	Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS				
	Organic Constituents	CASRN		(mg/kg unless noted otherwise)	(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0				
	Acenaphthylene	208-96-8		3.4	34.0				
<u></u>	Acetone	67-64-1		160.0	1600.0				
<u> </u>	Acetonitrile	75-05-8		38.0	380.0				
	Acetophenone	98-86-2		9.7	97.0				
	2-Acetylaminofluorene	53-96-3		140.0	1400.0				
	Acrolein	107-02-8		N/A	N/A				
	Acrylamide	79-06-1	19.0	23.0	230.0				
	Acrylonitrile	107-13-1	0.24	84.0					
_	Aldicarb sulfone	1646-88-4	-	0.28	840.0 2.8				
	Aldrin	309-00-2							
				0.066 N/A	0.66 N/A				
	4-Aminobiphenyl Aniline	92-67-1 62-53-3	0.13 0.81	14.0					
	o-Anisidine	90-04-0		-	140.0				
_		120-12-7		0.66	6.6				
	Anthracene			3.4	34.0				
	Aramite	140-57-8		N/A	N/A				
	alpha-BHC	319-84-6		0.066	0.66				
	beta-BHC	319-85-7	0.00014	0.066	0.66				
	delta-BHC	319-86-8		0.066	0.66				
	Barban	101-27-9		1.4	14.0				
	Bendiocarb	22781-23-3		1.4	14.0				
	Benomyl	17804-35-2		1.4	14.0				
	Benz[a]anthracene	56-55-3		3.4	34.0				
	Benzal chloride	98-87-3		6.0	60.0				
	Benzene	71-43-2		10.0	100.0				
	Benzo(b)fluoranthene	205-99-2		6.8	68.0				
	Benzo[a]pyrene	50-32-8		3.4	34.0				
	Benzo[ghi]perylene	191-24-2		1.8	18.0				
	Benzo[k]fluoranthene	207-08-9		6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0				
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0				
	Bromodichloromethane	75-27-4	0.35	15.0	150.0				
	Bromomethane	74-83-9	0.11	15.0	150.0				
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0				
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0				
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0				
	Butylate	2008-41-5	0.042	1.4	14.0				

□ Carbaryl

1.4

0.14

0.006

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7		1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
_	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	
ö	Di-n-octyl phthalate	117-84-0		28.0	280.0 280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
_		53-70-3		8.2	82.0
	Dibenz[a,h]anthracene			N/A	
	Dibenzo[a,e]pyrene 1,2-Dibromo-3-chloropropane	192-65-4 96-12-8		15.0	N/A 150.0
					150.0
	1,2-Dibromoethane Dibromomethane	106-93-4 74-95-3		15.0 15.0	150.0 150.0
	1,4-Dichlorobenzene	106-46-7		6.0	
			0.09	6.0	60.0
<u>-</u>	m-Dichlorobenzene	541-73-1			60.0
<u>-</u>	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
<u>-</u>	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
<u>_</u>	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
<u>_</u>	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
<u>_</u>	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
<u></u>	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
		NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8	0.023	0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8	0.0028	0.13	1.3
	Endrin aldehyde	7421-93-4	0.025	0.13	1.3
	Ethyl acetate	141-78-6	0.34	33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.12	160.0	1600.0
	Ethylene oxide	75-21-8	0.14	N/A	N/A
	Famphur	52-85-7	0.017	15.0	150.0
	Fluoranthene	206-44-0	0.068	3.4	34.0
	Fluorene	86-73-7	0.059	3.4	34.0
	Fluoride	16984-48-8	35.0	N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor (& its epoxide)	1024-57-3	0.016	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.000	0.005
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
	1,2,3,4,0,7,6-пертастногопретисния 1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	
	Hexachlorobenzene			10.0	0.025
	Hexachlorobutadiene	118-74-1 87-68-3	0.055 0.055		100.0
	Hexachlorocyclopentadiene	77-47-4	0.055	5.6	56.0
	Hexachloroethane			30.0	24.0
	Hexachloropropene	67-72-1	0.055		300.0
		1888-71-7	0.035	30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins) HxCDFs (All Hexachlorodibenzo-furans)	34465-46-8 55684-94-1	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene		0.000063	0.001	0.01
	L / / JI /	193-39-5		3.4	34.0
	lodomethane	74-88-4		65.0 170.0	650.0
	Isobutyl alcohol	78-83-1	5.6 0.021		1700.0
		465-73-6		0.066	0.66
]	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
	Methacrylonitrile	126-98-7	0.24	84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7	0.056	1.4	14.0
	Methomyl	16752-77-5	0.028	0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
☑	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
	Methyl methacrylate	80-62-6	0.14	160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Ø	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3		5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
		88-75-5		13.0	130.0
	o-Nitrophenol		0.028	29.0	
-	p-Nitrophenol	100-02-7			290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
무	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
_	Pentachloronitrobenzene	82-68-8		4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
므	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
므	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
_	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9	0.056	1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8	14.0	N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
	1346 (WCATS - R4)		inted 2/8/2021 2:3		Page 7 of 9

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
	Thiodicarb	59669-26-0	0.019	1.4	14.0
	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
\square	Toluene	108-88-3	0.08	10.0	100.0
	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
	Toxaphene	8001-35-2	0.0095	2.6	26.0
	Triallate	2303-17-5	0.042	1.4	14.0
	Tribromomethane	75-25-2	0.63	15.0	150.0
	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
	Trichloroethylene	79-01-6	0.054	6.0	60.0
	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
	Triethylamine	121-44-8	0.081	1.5	15.0
	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
	Vernolate	1929-77-7	0.042	1.4	14.0
	Vinyl chloride	75-01-4	0.27	6.0	60.0
	Xylene	1330-20-7	0.32	30.0	300.0
	2,4-Xylidine	95-68-1	0.01	0.66	6.6
	Antimony	7440-36-0	1.9	1.15	11.5
	Arsenic	7440-38-2	1.4	5.0	50.0
	Barium	7440-39-3	1.2	21.0	210.0
	Beryllium	7440-41-7	0.82	1.22	12.2
	Cadmium	7440-43-9	0.69	0.11	1.1
	Chromium	7440-47-3	2.77	0.6	6.0
	Lead	7439-92-1	0.69	0.75	7.5
	Mercury	7439-97-6	0.15	0.025	0.25
	Nickel	7440-02-0	3.98	11.0	110.0
	Selenium	7782-49-2	0.82	5.7	57.0
	Silver	7440-22-4	0.43	0.14	1.4
	Thallium	7440-28-0		0.2	2.0
	Vanadium	7440-62-2	4.3	1.6	16.0
	Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

45710 APPROVED

Waste Characteriz	ation Information
Waste Stream ID:	45710
WPF ID (Legacy):	
Waste Stream Name:	ORGANIC SYNTHESIS OF HIGH EXPLOSIVES
Expiration Date:	11/26/2021
Waste Type:	Solid Waste - Other
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Non-hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	<u>NA</u>
	Not Applicable: Not Applicable
EPA Source Code:	<u>NA</u>
	Not Applicable: Not Applicable

Waste Generation Estimates

YEAR	VOLUME
2021	10.00 gal
2020	10.00 gal
2019	10.00 gal



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
45710	

Generator's Z Number	Waste Generator's Name	(print) WMC'	s Z Number	WMC's Name (print)		Generator's Phone
233921	WINDLER, GARY	·	324836	BRINER,	PATRICK	5056061842
Generator's Mail Stop	Waste Generating Group	Waste Stream	m Technical Area	Building	Room	WMC Phone
C926	M-7		40	000012	105	5056651354
Waste Accumulation (che	eck only one)	•		M Central Accur	mulation Area Site	No: <u>3916</u>
☐ Satellite Accumulation /		lo:		□ NM Special V	Vaste Site	No:
☐ Less-than-90 Days Stor	age Area Site N	lo:		☐ None of the A	Above Site	No:
□TSDF	Site N	lo:		☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag		lo:		☐ Rad Staging	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site is	lo:	_	☐ Rad Storage	Area Site	No:
☐ ER Site	SWMII/AOC	No				
	on (check as many as appl					
	`	/) ached	Cample No. PE	A 4282 for WSP 457	10	
☑ Chemical/Physical Ana ☐ Radiological Analysis		ached	Sample No:	A 4202 IOI WOF 437	10	
☐ PCB Analysis		ached	Sample No:			
☑ Acceptable Knowledge	Documentation ☑ Att	ached Doc	cumentation No. Ch	emical Inventory for V	<i>N</i> SP 45710	
☑ Material Safety Data SI	neet (MSDS) ☑ Att	ached	Se	e attached in Docume	entation pa	
Section 1 - Waste Prevent	ion/Minimization (answer	all questions)				
Can hazard segregation, e	limination, or material subs	titution be used?	·	Yes (provide con	nments) ☑ N	lo
Can any of the materials in	the waste stream be recyc	led or reused?		☐ Yes (provide con	nments) 🗹 N	lo
Has waste minimization be	en incorporated into proce	dures or other pr	ocess controls?	₫ Yes	□N	lo (provide comments)
Can this waste be generat	ed outside a RCA?			☐ Yes (<i>provide com</i>	nments) 🗆 N	lo ☑ N/A
Comments:						
Section 2 - Chemical and	Physical Information					
Waste Type (check only o	nyoloai illioilliation					
	ne) Waste Category (check all that ann	o/v) Waste Sou	rce (check only on	ne) Waste M	latrix (check only one)
		check all that app	Waste Sou Waste Sou	rce (check only on	Waste M Gas	latrix (check only one)
☐ Unused/Unspent Chem ☐ Process Waste/Spent		check all that app	Waste Sou	rce A	Gas □ ≤1.5 /	latrix (check only one) Atmospheres Pressure
☐ Unused/Unspent Chem	ical ☐ Inorganic ☐ Organic ☐ Solvent (see ins	structions)	Waste Sou ☐ Decon ☐ Materia	Is Processing/Prod	Gas	
☐ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other	ical ☐ Inorganic ☐ Organic ☐ Solvent (see ins	structions)	Waste Sou ☐ Decon ☐ Materia ☑ Resear	Irce A Is Processing/Prod ch/Development/Te	Gas	Atmospheres Pressure
☐ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information	ical ☐ Inorganic ☐ Organic ☐ Solvent (see ins ☐ Degreaser (see ☐ Dioxin	structions)	Waste Sou ☐ Decon ☐ Materia ☑ Resear ☐ Schedu	Is Processing/Prod ch/Development/Te led Maintenance	Gas	Atmospheres Pressure Atmospheres Pressure
☐ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a	ical ☐ Inorganic ☐ Organic ☐ Solvent (see ins ☐ Degreaser (see ☐ Dioxin ☐ Electroplating	structions) instructions)	Waste Sou □ Decon □ Materia ☑ Resear □ Schedu □ Housek	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine	Gas □ ≤1.5 / □ >1.5 / □ >1.5 / □ Liquif	Atmospheres Pressure Atmospheres Pressure ried Compressed Gas
☐ Unused/Unspent Chem ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No	ical ☐ Inorganic ☐ Organic ☐ Solvent (see ins ☐ Degreaser (see ☐ Dioxin	structions) instructions) lous Waste or Re	Waste Sou □ Decon □ Materia ☑ Resean □ Schedu □ Housek	Is Processing/Prod ch/Development/Te led Maintenance	Gas □ ≤1.5 / luction esting □ Liquif Liquid □ Aque	Atmospheres Pressure Atmospheres Pressure ried Compressed Gas
☐ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a	Inorganic	structions) instructions) lous Waste or Retained-In	Waste Sou □ Decon □ Materia ☑ Resean □ Schedu □ Housek	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine eanup - Routine ng - Routine Monito	Gas □ ≤1.5 / luction esting □ Liquif Liquid □ Aqueoring □ Non-/ □ Suspo	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas ous Aqueous ended Solids/Aqueous
☐ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive	Ical	structions) instructions) lous Waste or Retained-In	Waste Sou □ Decon □ Materia ☑ Resear □ Schedu □ Housek esidue □ Spill Cle □ Samplir	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine eanup - Routine ng - Routine Monito	Gas □ ≤1.5 / luction esting □ Liquif Liquid □ Aque oring □ Suspo	Atmospheres Pressure Atmospheres Pressure Tied Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
☐ Unused/Unspent Chem ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☐ No ☑ Non-radioactive ☐ Radioactive - Low Leve ☐ Radioactive - Transuran	Ical	structions) instructions) lous Waste or Retained-In	Waste Sou □ Decon □ Materia □ Resear □ Schedu □ Housek □ Spill Cle □ Samplir □ Other (d	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine eanup - Routine ng - Routine Monito describe)	Gas □ ≤1.5 / □ >1.5 / □ sting □ Liquif Liquid □ Aqueoring □ Non-/ □ Suspo Aqueoring	Atmospheres Pressure Atmospheres Pressure Tied Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
☐ Unused/Unspent Chem ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☐ No ☑ Non-radioactive ☐ Radioactive - Low Leve ☐ Radioactive - Transuran Waste Destination (check	Ical	structions) instructions) lous Waste or Retained-In ess cal	Waste Sou □ Decon □ Materia □ Resear □ Schedu □ Housek □ Spill Cle □ Samplir □ Other (d	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine eanup - Routine ng - Routine Monito describe)	Gas □ ≤1.5 / □ >1.5 / □ Liquid □ Aque □ Non-/ □ Suspr Aque Solid	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non- ous
□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check	Ical	structions) instructions) lous Waste or Retained-Iness cal	waste Sou □ Decon □ Materia ☑ Resear □ Schedu □ Housek □ Spill Cle □ Samplir □ Other (d	Is Processing/Prod ch/Development/Te led Maintenance eeping - Routine eanup - Routine ng - Routine Monito describe)	Gas □ ≤1.5 / □ >1.5 / □ besting □ Liquid □ Aquecoring □ Susport □ Aquecoring □ Susport □ Solid □ Powd	Atmospheres Pressure Atmospheres Pressure Tied Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check	Inorganic	structions) instructions) lous Waste or Retained-Iness cal	waste Sou □ Decon □ Materia ☑ Resear □ Schedu □ Housek □ Spill Cle □ Samplir □ Other (d	Is Processing/Prodeh/Development/Teled Maintenance eeping - Routine eanup - Routine ng - Routine Monitedescribe) Irce Beant ection/Upgrades	Gas □ ≤1.5 / □ >1.5 / □ Liquid □ Aquecoring □ Susport Aquecoring □ Solid □ Powdd □ Solid	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure And Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non- ous der/Ash/Dust
□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check	Ical	structions) instructions) lous Waste or Retained-Iness cal	waste Sou Decon Ateria Resear Schedu Housek Spill Cle Samplir Other (c	Is Processing/Prodeh/Development/Teled Maintenance eeping - Routine eanup - Routine Monitedescribe) Irce Belletter	Gas □ ≤1.5 / □ luction esting □ Liquid □ Aque □ Non-/ □ Suspr Aque Solid □ Powd □ Solid □ Sludg	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure And Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non- ous der/Ash/Dust
□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE	Ical	etructions) instructions) lous Waste or Retained-In ess cal er (see instruction	waste Sou Decon Ateria Resear Schedu Housek Spill Cle Samplin Other (c	Is Processing/Prodech/Development/Teled Maintenance eeping - Routine eanup - Routine mg - Routine Monitedescribe) Irce Belent ection/Upgrades ion Decome early recedescribed	Gas □ ≤1.5 / □ luction esting □ Liquif Liquid □ Aque □ Non-/ □ Suspr Aque Solid □ Powd □ Solid □ Sludg □ Absol	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Tied Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non- ous der/Ash/Dust ge rbed/Solidified Liquid
□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check	Ical	etructions) instructions) lous Waste or Retained-In ess cal er (see instruction	waste Sou Decon Ateria Resear Schedu Housek Spill Cle Samplir Other (c	Is Processing/Prodech/Development/Teled Maintenance eeping - Routine eanup - Routine eanup - Routine Monitor describe) Irce Belent ection/Upgrades ion Decome eative Derived /Legacy	Gas □ ≤1.5 / □ luction esting □ Liquid □ Aque oring □ Suspo Aque Solid □ Powd □ Sludg □ Absol □ Debri	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Admospheres Pressure Admospher
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□ Unused/Unspent Chem ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information	Ical	structions) instructions) lous Waste or Retained-In ess cal er (see instruction structions) centration 500 ppm m ste Contaminated	waste Sou Decon Materia Resear Schedu Housek Spill Cle Samplir Other (d waste Sou Abatem Constru Decon/l Decon/l Remed Repack Unsche d Soil	Is Processing/Prodeh/Development/Teled Maintenance eeping - Routine eanup - Routine earup - Routine earup - Routine earup - Routine earup - Routine Monitor describe) Irce Buent ection/Upgrades ion Decomediative Derived /Legacy eation/Restoration ing (secondary) duled Maintenance eeping (non-routine eeping (non-routine)	Gas □ ≤1.5 / □ >1.5 / □ Liquif Liquid □ Aque □ Non-/ □ Suspr Aque Solid □ Powd □ Solid □ Sludg □ Absor □ Debri Matrix T □ Heter	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure Atmospheres
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Section 3 - Process and Waste Description

Process Description:

The waste process is derived from general organic synthesis of high explosives which involves stirring various reagents in organic solvents, filtering off the precipitates, extracting with organic solvents and then rotovapping off solvent for reuse. Most of the waste from this process will come from washing glassware, hence the main component is water, with trace acetone.

Waste Description:
Waste will consist of Water, Acetone, Diethyl Ether, Hexanes, Ethanol, High Explosives and Dissolved Organics.

Section 4 - Characteristics							
Ignitability (check only one)	Corrosivity (check only one) (pH)				Reactivity (check as many as apply		Point (check only one)
□ < 73 F (< 22.8 C)	□<= 2.0	0			☐ RCRA Unstable	□<=95	5 F (<= 35 C)
□ 73 - 99 F (22.8 - 37.2 C)	☑ 2.1 -				☐ Water Reactive	☑ >95 F	(> 35 C)
□ 100 - 139 F (37.8 - 59.4 C)	4.1 - 0	6.0			☐ Cyanide Bearing		pplicable
□ 140 - 200 F (60.0 - 99.3 C)	□6.1 - 9	9.0			☐ Sulfide Bearing		
□ > 200 (> 99.3 C)	9.1 -	12.4			☐ Pyrophoric		
☐ EPA Ignitable - Non-liquid	□>= 12	2.5			☐ Shock Sensitive		
□ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]		
□ DOT Oxidizer		aqueous			☑ Non-Reactive		
☑ Not Ignitable							
— Not ignitable							
	С	haracteriz	ation Met		Concentration of Contaminar Contaminant present at	its	4
Identify for all contaminants listed	AK	TCLP	Total	None or Non-detect	Minimum Maxiumum		Regulatory Limit
Toxicity Characteristic Metals	AIX	, IOLI	Total	IVOIT-GCCCCC	(10,000 ppm = 1%)		, ,
Arsenic			\square	$\overline{\mathbf{Q}}$	to	ppm	5.0 ppm
Barium			V		0.01 to 0.254	ppm	100.0 ppm
Cadmium			V	$\overline{\checkmark}$	to	ppm	1.0 ppm
Chromium			V	$\overline{\mathbf{A}}$	to	ppm	5.0 ppm
Lead			V	$\overline{\checkmark}$	to	ppm	5.0 ppm
Mercury			V	\square	to	ppm	0.2 ppm
Selenium			Ø	V	to	ppm	1.0 ppm
Silver			V	\square	to	ppm	5.0 ppm
Toxicity Characteristic Organics							1
Benzene			<u> </u>		to	ppm	0.5 ppm
Carbon tetrachloride			☑	☑	to	ppm	0.5 ppm
Chlorobenzene			<u> </u>	<u> </u>	to	ppm	100.0 ppm
Chloroform			☑	<u> </u>	to	ppm	6.0 ppm
Cresol			☑	<u> </u>	to	ppm	200.0 ppm
p-Cresol			☑	<u> </u>	to	ppm	200.0 ppm
m-Cresol			<u> </u>	<u> </u>	to to	ppm	200.0 ppm
o-Cresol 1,4-Dichlorobenzene				<u> </u>	to	ppm	200.0 ppm
1,2-Dichloroethane	-	H	<u> </u>	<u> </u>	to	ppm ppm	7.5 ppm 0.5 ppm
1,1-Dichloroethylene			<u> </u>	<u> </u>	to	ppm	0.5 ppm
2.4-Dinitrotoluene			V	V	to	ppm	0.13 ppm
Hexachlorobenzene			V		to	ppm	0.13 ppm
Hexachlorobutadiene			Ø	<u> </u>	to	ppm	0.5 ppm
Hexachloroethane			$\overline{\square}$	<u> </u>	to	ppm	3.0 ppm
Methyl ethyl ketone			<u> </u>	<u> </u>	to	ppm	200.0 ppm
Nitrobenzene			<u> </u>	<u> </u>	to	ppm	2.0 ppm
Pentachlorophenol				V	to	ppm	100.0 ppm
Pyridine			V	$\overline{\checkmark}$	to	ppm	5.0 ppm
Tetrachloroethylene			V	$\overline{\checkmark}$	to	ppm	0.7 ppm
Trichloroethylene			\square	$\overline{\square}$	to	ppm	0.5 ppm
2,4,6-Trichlorophenol			V	\square	to	ppm	2.0 ppm
2,4,5-Trichlorophenol			V	\square	to	ppm	400.0 ppm
Vinyl chloride			$\overline{\checkmark}$	V	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	☑			\square	to	ppm	0.03 ppm
2,4-D	Ø			Ø	to	ppm	10.0 ppm
Endrin	Ø	무	<u> </u>		to	ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			Ø	to	ppm	0.008 ppm
Lindane (gamma-BHC)	<u> </u>		무	<u> </u>	to	ppm	0.4 ppm
Methoxychlor 2,4,5-TP (Silvex)	<u> </u>		<u> </u>	<u> </u>	to to	ppm	10.0 ppm
Toxaphene				<u> </u>	to	ppm ppm	1.0 ppm 0.5 ppm
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Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

	Name of constituent	Minimum (ppm)	Maximum (pp
7732-18-5	Water	940000 to	950000
60-29-7	Ethyl ether	4000 to	5000
67-64-1	Acetone	9500 to	10000
110-54-3	Hexane	4500 to	5000
64-17-5	Ethanol	3000 to	5000
141-78-6	Ethyl acetate	30000 to	50000
	2-nitropyrrole	3000 to	5000
	4-nitropyrrole	1500 to	2000
	TATB	140 to	200
118-96-7	Trinitrotoluene[2,4,6-]	16 to	20
2691-41-0	HMX	300 to	500
	Total of max. ranges of this section and page 2		103.27 in %
	Additional Information		
Waste is non-explos Form 2038, docume	tibility issues associated with this waste stream. Waste is not reactive with itself live, therefore non-RCRA-D003 reactive and non-DOT Hazard Class 1 explosive nting the waste as "Material Documented as Safe (MDAS)", must be attached (usubmitting a WDR for a container associated with this WSP.	э.	. G
	ntrol Documentation		
Do the procedures for	or this process cover how to manage this waste? ☑ Yes ☐ No	(provide comments)	
		()	
waste to/from contai	or this process address controls to prevent changes to waste constituents and ciners? ☑ Yes ☐ No (provide comments)	concentrations or addition or rem	noval of
waste to/from contai Comments: ection 7 - Packagin Describe how the wa	ners? ☑ Yes ☐ No (provide comments) In a g and Storage Control In a g a g and Storage Control In a g a g a g a g a g a g a g a g a g a	concentrations or addition or rem	noval of
waste to/from contain Comments: ection 7 - Packagin Describe how the war Waste will be packaged dentify the storage not contain the conta	iners? ☑ Yes ☐ No (provide comments) Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Inanagement controls that will be used for this waste stream: (check all that applications)	ly)	noval of
waste to/from contain Comments: ection 7 - Packagin Describe how the war Waste will be packaged dentify the storage in Tamper Indication	iners? ☑ Yes ☐ No (provide comments) Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Interpretation of the controls that will be used for this waste stream: (check all that applications) Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or build	ly)	noval of
waste to/from contain Comments: ection 7 - Packagin Describe how the ware will be packaged dentify the storage in a Tamper Indication ection 8 - Waste Cerea.	iners? ☑ Yes ☐ No (provide comments) Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Interpretation of the controls that will be used for this waste stream: (check all that applications) Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or build certification Statements	ly)	noval of
waste to/from contain Comments: ection 7 - Packagin Describe how the ware will be packaged dentify the storage in a Tamper Indication ection 8 - Waste Cerea.	iners? ☑ Yes ☐ No (provide comments) Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Interpretation of the controls that will be used for this waste stream: (check all that applications) Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or build	ly)	noval of
waste to/from contain Comments: ection 7 - Packagin Describe how the waste will be packaged dentify the storage in Tamper Indication ection 8 - Waste Cetal Waste appears to	iners? ☑ Yes ☐ No (provide comments) Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Interpretation of the controls that will be used for this waste stream: (check all that applications) Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or build certification Statements	ly)	noval of
waste to/from contain Comments: Section 7 - Packagin Describe how the wawwaste will be packaged Identify the storage in Tamper Indication Section 8 - Waste Comments Waste appears to Waste appears to Waste stream need Waste does not make Waste does not make Waste does not make Waste Generator Comments on this formation of the comments	Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. Interpretation Statements Independent WAC attachment for: SW-OTHER Independent does not be seen to see the criteria for any known TSDF. (DOE approval is required. Contact the offins [PADWP] for assistance.) Interpretation: Based on my knowledge of the waste and/or chemical/physical anarm is correct and that it meets the requirements of the applicable waste accepta regulatory agencies and that there are significant penalties for submitting false in the significant penalties for submitting false.	ly) ing □ Other (describe) ce of the Principle Associate Dialysis, I certify that the waste chance criteria. I understand that the	rector for aracterization his information v
waste to/from contain Comments: ection 7 - Packagin Describe how the ware Waste will be package dentify the storage in Tamper Indication ection 8 - Waste Ce Waste appears to Waste stream nee Waste does not make weapons Program Waste Generator Ce information on this for e made available to imprisonment for known	Ing and Storage Control Instead will be packaged in according to the applicable WAC. In DOT compliant polyethylene containers. Interpretation Statements Index exception/exemption for treatment, storage, or disposal. Interpretation: Based on my knowledge of the waste and/or chemical/physical ana arm is correct and that it meets the requirements of the applicable waste acceptaring for submitting false in wing violations.	ly) ing □ Other (describe) ce of the Principle Associate Dialysis, I certify that the waste chance criteria. I understand that the	rector for aracterization his information v
waste to/from contain Comments: ection 7 - Packagin Describe how the waw Waste will be packaged dentify the storage in Tamper Indication ection 8 - Waste Ce Waste appears to Waste stream nee Waste does not make weapons Program Waste Generator Ce information on this for e made available to imprisonment for kno Signature: GARY V Waste Management e complete and acce	Ing and Storage Control Instead will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. In an agement controls that will be used for this waste stream: (check all that applications of the containers) In an agement controls that will be used for this waste stream: (check all that applications of the containers) In an agement controls that will be used for this waste stream: (check all that applications of the contact of the applicable waste acceptance of the contact of the con	ing Other (describe) ice of the Principle Associate Dialysis, I certify that the waste chance criteria. I understand that the information, including the possib	rector for aracterization his information voility of fines and
waste to/from contain Comments: ection 7 - Packagin Describe how the ware waste will be packaged dentify the storage in Tamper Indication ection 8 - Waste Comment of Waste appears to Waste stream need Waste Generator Comment on this formation on this formation. Signature: GARY V	Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. In an agement controls that will be used for this waste stream: (check all that applications are included in Dot in the principle of the waste in Docked cabinet or build in Docked in Statements In an agement controls that will be used for this waste stream: (check all that applications are included in Docked cabinet or build in Docked in Docked in Docked cabinet or build in Docked in Statements In a statement in Sw-OTHER In a secreption of the waste in Sw-OTHER In a secreption of the waste and/or chemical/physical and in secreption in Sw-OTHER in Sw-OTHER in Sw-OTHER in Sw-OTHER in Sw-OTHER In a secreption of the waste and/or chemical/physical and in secreption in Sw-OTHER	ing Other (describe) ice of the Principle Associate Dialysis, I certify that the waste chance criteria. I understand that the information, including the possib	rector for aracterization his information voility of fines and
waste to/from contain Comments: ection 7 - Packagin Describe how the waw Waste will be packaged dentify the storage in Tamper Indication ection 8 - Waste Ce Waste appears to Waste stream nee Waste does not make weapons Program Waste Generator Ce offormation on this for e made available to imprisonment for kno Signature: GARY V Waste Management e complete and according requirements of the Signature: JOHN P	Ing and Storage Control Inste will be packaged in according to the applicable WAC. Inged in DOT compliant polyethylene containers. In an agement controls that will be used for this waste stream: (check all that applications are included in Dot compliant polyethylene containers. In an agement controls that will be used for this waste stream: (check all that applications are included in Dot in the containers. In an agement controls that will be used for this waste stream: (check all that applications are included in Dot in the containers. In an agement controls that will be used for this waste stream: (check all that applications and that it interests the containers of the containers of the containers of the containers of the applicable waste acceptand that it meets the requirements of the applicable waste acceptand in the containers of the c	ing Other (describe) Ice of the Principle Associate Director of t	rector for aracterization his information voility of fines and vided appears to generator meets be complete ar

Attachment 4 - LDR and UHC

		7110	ACTION T - LDIX	and one					
	tify category and presence of any constituents -Wastewater/Wastewater Category (check of		(equal to or above	e limit).					
□ Non Wastewater □ Wastewater [as defined by 40 CFR 268.2(f)] □ Lab Pack [40 CFR 268.2(f)] Sign Certification #1 Notifications and Certifications - Check the applicable boxes									
	•	oilcable boxe	es						
	Generator Requirements: This shipment contains hazardous waste contaminated soil that does not meet treatment standards This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards Hazardous wastes (except soil) meeting treatment standards at point of generation Sign Certification #3 Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4 TSDE or Generator Treatment:								
TSDF or Generator Treatment: ☐ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 ☐ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 ☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 ☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS ☐ Wastes or residues from characteristic hazardous waste treatment not meeting UTS ☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed ☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment standards to be land disposed									
	(Check the applicable underlying cons	tituents abov	e the concentratio	ardous Constituents In levels for D001 through D043 ch	aracterstic wastes only)				
□ ^	lo Underlying Hazardous Constituents in th	nis waste str	eam. Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS				
	Organic Constituents	CASRN			(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0				
	Acenaphthylene	208-96-8	0.059	3.4	34.0				
	Acetone	67-64-1	0.28	160.0	1600.0				
	Acetonitrile	75-05-8	5.6	38.0	380.0				
	Acetophenone	98-86-2	0.01	9.7	97.0				
	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0				
	Acrolein	107-02-8	0.29	N/A	N/A				
	Acrylamide	79-06-1	19.0	23.0	230.0				
	Acrylonitrile	107-13-1	0.24	84.0	840.0				
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8				
	Aldrin	309-00-2	0.021	0.066	0.66				
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A				
	Aniline	62-53-3	0.81	14.0	140.0				
	o-Anisidine	90-04-0	0.01	0.66	6.6				
	Anthracene	120-12-7	0.059	3.4	34.0				
	Aramite	140-57-8	0.36	N/A	N/A				
	alpha-BHC	319-84-6	0.00014	0.066	0.66				
	beta-BHC	319-85-7	0.00014	0.066	0.66				
	delta-BHC	319-86-8	0.023	0.066	0.66				
	Barban	101-27-9	0.056	1.4	14.0				
	Bendiocarb	22781-23-3	0.056	1.4	14.0				
	Benomyl	17804-35-2	0.056	1.4	14.0				
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0				
	Benzal chloride	98-87-3	0.055	6.0	60.0				
	Benzene	71-43-2	0.14	10.0	100.0				
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0				
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0				
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0				
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0				
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0				
	Bromodichloromethane	75-27-4	0.35	15.0	150.0				
	Bromomethane	74-83-9	0.11	15.0	150.0				
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0				
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0				
П	Butyl benzyl phthalate	85-68-7		28.0	280.0				

□ Butylate

□ Carbaryl

14.0

1.4

1.4

0.14

0.042

0.006

2008-41-5

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7		1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	
	o-Cresol	95-48-7		5.6	56.0
<u>-</u>					56.0
	p-Cresol	106-44-5		5.6	56.0
므	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
<u>_</u>	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
<u></u>	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
<u> </u>	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.030	0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
Form	13.46 (WCATS PA)	04-00-2	U.Z	-	Daga 6 of 10

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3		28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7		N/A	N/A
Disulfoton	298-04-4		6.2	62.0
Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4		1.4	14.0
Endosulfan I	959-98-8		0.066	0.66
Endosulfan II	33213-65-9		0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8		0.13	1.3
Endrin aldehyde	7421-93-4		0.13	1.3
Ethyl acetate	141-78-6		33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7		160.0	1600.0
Ethyl methacrylate	97-63-2		160.0	1600.0
Ethylene oxide	75-21-8		N/A	N/A
Famphur	52-85-7		15.0	150.0
Fluoranthene	206-44-0		3.4	34.0
Fluorene	86-73-7		3.4	34.0
Fluoride	16984-48-8		N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8		0.066	0.66
Heptachlor epoxide	1024-57-3		0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
	87-68-3 77-47-4		5.6	56.0
Hexachlorocyclopentadiene Hexachloroethane	67-72-1	0.057 0.055	2.4 30.0	24.0
	1888-71-7		30.0	300.0
Hexachloropropene HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	300.0
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
lodomethane	74-88-4		65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*		0.2	2.0
Methacrylonitrile	126-98-7		84.0	840.0
Methanol	67-56-1		0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7		1.4	14.0
Methomyl	16752-77-5		0.14	1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1		33.0	330.0
Methyl methacrylate	80-62-6		160.0	1600.0
13.46 (WCATS PA)		winted 2/9/2021 2.	-	Dans 7 of

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5	0.028	13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2	0.042	1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
_	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
_	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9		1.4	14.0
<u></u>	Pyrene	129-00-0	0.067	8.2	82.0
<u>-</u>	Pyridine	110-86-1	0.014	16.0	160.0
<u>_</u>	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5	0.72	7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



CONTAINER PROFILE W847745 CON-SW-OTHER

WS ID: 45710 C ID: 847745 Opt ID: PO 525 WR007 ACTIVE

GENERAL INFORMATION

Container ID: 847745 Labeled ID: W847745

Optional ID: PO 525 WR007

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 45710

Work Path: CON-SW-OTHER

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: NO

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 14-gallon poly

Origin Date: 27-Nov-2018 10:00 am

Accum Start Date:

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: GARY WINDLER (233921)
Insert By: JOHN PIENIAZEK (106155)

Waste Desc: ORGANIC SYNTHESIS OF HIGH EXPLOSIVES

WEIGHTS AND VOLUMES

Container Volume: 15.00 gal **Gross Weight:** 86.10 lb

Waste Volume: 10.00 gal Tare Weight: 9.00 lb

Net Weight: 77.10 lb

LOCATION

Pickup (Origin): LANL: 40: 000012

Current: LANL: 36: 000048

COST CODES								
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode	
5K070A	JWB2	6418	0101	100.00	INACTIVE	ACTIVE	SELECTION LIST	

DOT SHIPPING DESC

Status/

Manifest IDs DOT Shipping Description

ACTIVE NON-REGULATED WASTE (WATER WITH TRACE HE)

	TASK HISTORY				
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject		
01/24/2019 3:11 PM	1879058 CANCELLED	LANL:40 - WDR-NRAD	NO		
01/24/2019 3:15 PM	1881743 EXECUTED	LANL:40 » 36:000048	NO		



CONTAINER PROFILE W847745 CON-SW-OTHER

WS ID: 45710 C ID: 847745 Opt ID: PO 525 WR007 ACTIVE

TASK HISTORY					
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject		
10/01/2019 7:41 AM	1824444 EXECUTED	LANL:36: » 36:000048	NO		
10/01/2019 7:41 AM	1855777 EXECUTED	LANL:36: » 36:000048	NO		
10/08/2019 11:31 AM	1889710 PENDING	LANL:36 » 60:000017	NO		
10/22/2019 2:46 PM	1890318 CANCELLED	LANL:36 » 60:000017	NO		
11/07/2019 11:32 AM	1890827 PENDING	LANL:36 » 60:000017	NO		
02/04/2020 7:26 AM	1889349 EXECUTED	LANL:36 - WDR-NRAD	NO		
02/20/2020 10:57 AM	1894184 CANCELLED	LANL:36 » 60:000017	NO		

Note: Highlighted row indicates container was output or receiving container for the indicated task

DOCUMENTATION					
Doc. Number	Title	Uploaded By			
1	C of C W847745	JOHN PIENIAZEK (106155)			
2	Closure Checklist W847745	JOHN PIENIAZEK (106155)			

	EDIT LOG							
Date Time/ User Name	Quality Record	Explanation						
03/28/2019 10:44 AM JOHN PIENIAZEK (106155)	NO	Edit Container Authorization; Locked Container. Looking for [P=18861, C=847745]; Error: Permission Not Found; Reason for Edit: Change location						
12/20/2018 9:52 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=847745]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn						
11/27/2018 10:25 AM JOHN PIENIAZEK (106155)	YES	C_MASTER.VOL_CONTAINER [847745] changed from 14.0 to 15.0						
11/27/2018 10:24 AM JOHN PIENIAZEK (106155)	YES	C_MASTER.WEIGHT_WASTE [847745] changed from 78.1 to 77.1						
11/27/2018 10:24 AM JOHN PIENIAZEK (106155)	YES	C_MASTER.WEIGHT_TARE [847745] changed from 8.0 to 9.0						
11/27/2018 10:09 AM JOHN PIENIAZEK (106155)	NO	Create Container Authorization; Looking for [P=18861, WS=45710, WP=221, U=1439]; Found [P=18861, W=47, F=55, U=ALL, B=1, G=40-GEN];						
11/27/2018 10:09 AM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=847745/PATH_ID=221): PASSED						

Attachment 2

Copper Bioleaching

Waste Stream Profiles 49344 and 44204 and Container Profiles W849416, W850678, W853362, W858199, and W858200



WASTE PROFILE FORM COVER SHEET

49344 **PENDING APPROVAL**

Waste Characteriza	ation Information
Waste Stream ID:	49344
WPF ID (Legacy):	
Waste Stream Name:	BIOLEACHING WITH BACTERIA
Expiration Date:	
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	
EPA Source Code:	
Waste Generation	Estimates

YEAR **VOLUME** 1.00 L 2021



WASTE PROFILE FORM

Referenc	e Number						
WCATS ID Legacy WPF ID							
49344							

Generator's Z Number	Waste Generator's Name	e (print)	WMC's Z Nu	ımber	WMC's Name (p		Generator's Phone
108963	GOODWIN, LYN	NE	208	498	MARTINE	EZ, PHILIP	5056653763
Generator's Mail Stop	Waste Generating Group	Waste	Stream Tech	nnical Area	Building	Room	WMC Phone
E549	MST-7		43		000001	222	5056060818
Waste Accumulation (che					_		
`	,						No:
☑ Satellite Accumulation A		No: <u>6029</u>			□ NM Special V	Vaste Site	No:
☐ Less-than-90 Days Stor	age Area Site	No:			□ None of the A	Above Site	• No:
☐ TSDF ☐ Universal Waste Storag	o Aroa Site	No:			□ PCBs Storage □ Rad Staging	e Area Site	9 No:
☐ Used Oil for Recycle		No:			☐ Rad Staging /	Area Site	No:
ER Use Only	Oito				Trad Otorage	Alca Ollo	
☑ ER Site	SWMU/AO	No NA					
Method of Characterization	`	• /	0				
☐ Chemical/Physical Ana		ttached		mple No:			
☐ Radiological Analysis ☐ PCB Analysis		ttached ttached		mple No: mple No:			
☐ Acceptable Knowledge		ttached		ation No: DO	C1		
☑ Material Safety Data Sh		ttached	Document		C2-7		
— Iviatorial Galety Data Of	icet (MODO)	attaon lo a		20	·		
0 (1 4)		" "					
Section 1 - Waste Prevent	•						1-
Can hazard segregation, e					Yes (provide con		
Can any of the materials in		•			Yes (provide con		
Has waste minimization be		edures or o	other process		Yes		No (provide comments)
Can this waste be generat	ed outside a RCA?			L	Yes (provide con	nments) 🗆 N	No ☑ N/A
Comments:							
Section 2 - Chemical and I	Physical Information						
Waste Type (check only of		(check all t	that apply)	Waste Soul	ce (check only on	ne) Waste N	Matrix (check only one)
Waste Type (check only of	(Maste Category	(check all t	that apply)	Waste Sour	ce (check only on	waste M	Matrix (check only one)
☐ Unused/Unspent Chemi	me) Waste Category cal ☑ Inorganic	(check all t	that apply)			Gas	
	(Maste Category			Waste Soul		Gas □ ≤1.5	Atmospheres Pressure
☐ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other	me) Waste Category cal ☑ Inorganic ☑ Organic	nstructions)	Waste Soul ☐ Decon ☐ Materials ☑ Researc	rce A s Processing/Prod h/Development/Te	Gas	Atmospheres Pressure Atmospheres Pressure
☐ Unused/Unspent Chemi ☑ Process Waste/Spent	me) Waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Degreaser (se	nstructions ee instructio)	Waste Soul ☐ Decon ☐ Materials ☑ Researd ☐ Schedul	rce A s Processing/Prod h/Development/Te ed Maintenance	Gas □ ≤1.5 □ uction □ >1.5 □ Liquit	Atmospheres Pressure
☐ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other	me) Waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Degreaser (see i □ Dioxin RCA? □ Electroplating	nstructions ee instructio) ons)	Waste Soul ☐ Decon ☐ Materials ☑ Researd ☐ Schedul ☐ Houseke	rce A s Processing/Prod h/Development/Te ed Maintenance eeping - Routine	Gas □ ≤1.5 □ valuation esting □ Liquid	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas
☐ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information	me) Waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Degreaser (see i) □ Dioxin RCA? □ Electroplating □ Treated Haza	nstructions ee instructions rdous Was) ons)	Use Sour Decon Decon Materials Researc Schedul Houseke	rce A s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine	Gas □ ≤1.5 luction ⇒1.5 □ Liquid Liquid ☑ Aque	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas
☐ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a	me) waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Degreaser (see □ Dioxin RCA? □ Electroplating □ Treated Haza □ No-Longer Co	nstructions ee instructions rdous Was ontained-In) ons)	Waste Sour □ Decon □ Materials □ Researc □ Schedul □ Houseke □ Spill Cle □ Samplin	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito	Gas □ ≤1.5 . luction □ >1.5 □ Liquid Liquid □ Aque oring □ Non-A	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous
☐ Unused/Unspent Chemi ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No	me) Waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Dioxin RCA? □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro	nstructions ee instruction rdous Was ontained-In cess) ons)	Use Sour Decon Decon Materials Researc Schedul Houseke	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito	Gas □ ≤1.5. luction □ >1.5 □ Liquid Liquid □ Aque oring □ Non- □ Susp	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous pended Solids/Aqueous
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☐ Unused/Unspent Chemi ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☐ No ☑ Non-radioactive ☐ Radioactive - Low Leve ☐ Radioactive - Transurar	me) waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Dioxin RCA? □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro □ Infectious/Med	nstructions ee instruction rdous Was ontained-In cess) ons)	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	Gas □ ≤1.5. luction esting □ >1.5 □ Liquid Liquid □ Aque oring □ Non- □ Susp □ Susp Aque	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous pended Solids/Aqueous pended Solids/Non-
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□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check	me) waste Category cal □ Inorganic □ Organic □ Solvent (see i □ Dioxin RCA? □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro □ Infectious/Med	nstructions see instruction rdous Was ontained-In cess dical) ons) te or Residue structions)	Waste Sour □ Decon □ Materials □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	Gas □ ≤1.5. luction esting □ >1.5 □ Liquid □ Aque oring □ Non □ Susp □ Aque Solid □ Powo	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous ended Solids/Aqueous ended Solids/Non- eous der/Ash/Dust
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□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check	me) cal □ Inorganic □ Organic □ Solvent (see i □ Degreaser (se □ Dioxin □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro □ Infectious/Med □ Biological □ Beryllium □ Empty Contai □ Battery (see in Asbestos □ Friable	nstructions see instruction rdous Was ontained-In cess dical) ons) te or Residue structions)	Waste Sour □ Decon □ Materials □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour □ Abateme □ Construe □ Demoliti	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	Gas □ ≤1.5. □ Liquid Liquid □ Aque oring □ Non □ Susp Aque Solid □ Powo	Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous eended Solids/Aqueous eended Solids/Non- eous der/Ash/Dust
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check	me) cal □ Inorganic □ Organic □ Solvent (see i □ Dioxin □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro □ Infectious/Mer □ Biological □ Beryllium □ Empty Contai □ Battery (see ir Asbestos □ Friable □ Non-Friable	nstructions ee instruction rdous Was ontained-In cess dical ner (see ins) ons) te or Residue structions)	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Abateme ☐ Construc ☐ Decon/D	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	Gas □ ≤1.5. □ Liquid Liquid □ Aque oring □ Susp Aque Solid □ Powo □ Solid □ Solid □ Solid □ Solid □ Abso	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous ended Solids/Aqueous eended Solids/Non- eous der/Ash/Dust ge prbed/Solidified Liquid
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check	me) cal □ Inorganic □ Organic □ Solvent (see i □ Dioxin □ Electroplating □ Treated Haza □ No-Longer Co □ Explosive Pro □ Infectious/Mer □ Biological □ Beryllium □ Empty Contai □ Battery (see ii Asbestos □ Friable □ Non-Friable □ CB Source Co	nstructions ee instruction rdous Was ontained-In cess dical ner (see ins nstructions)) ons) te or Residue structions)	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Abateme ☐ Construc ☐ Decon/D ☐ Investiga ☐ Orphan/	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) cce B ent ction/Upgrades on etive Derived Legacy	Gas □ ≤1.5. □ Liquid Liquid □ Aque oring □ Non □ Susp Aque Solid □ Powo	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous ended Solids/Aqueous eended Solids/Non- eous der/Ash/Dust ge prbed/Solidified Liquid
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check	me) waste Category cal longanic Organic Solvent (see i Degreaser (se Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mer Biological Beryllium Battery (see in Asbestos Friable Non-Friable PCB Source Co	nstructions ee instruction rdous Was ontained-In cess dical ner (see ins nstructions)) ons) te or Residue structions)	Waste Sour □ Decon □ Materials □ Researc □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour □ Abateme □ Construc □ Demoliti □ Decon/□ □ Investiga □ Orphan/□ Remedia	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) cce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration	Gas □ ≤1.5. □ >1.5 □ Liquid Liquid □ Aque □ Non- □ Susp Aque Solid □ Powo □ Solid □ Sludo □ Abso □ Debri	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous ended Solids/Aqueous eended Solids/Non- eous der/Ash/Dust ge prbed/Solidified Liquid
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information	me) Maste Category Inorganic Organic Solvent (see i Degreaser (see i Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mer Biological Beryllium Battery (see ii Asbestos Friable Non-Friable PCB Source Co PCB < 50 ppr PCB >= 50 - <	nstructions ee instruction rdous Was ontained-In cess dical ner (see ins nstructions) ncentration < 500 ppm) ons) te or Residue structions)	Waste Sour □ Decon □ Materials □ Researc □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour □ Abateme □ Construc □ Demoliti □ Decon/□ □ Investiga □ Orphan/ □ Remedia □ Repacki	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) cce B ent ction/Upgrades on etive Derived Legacy ation/Restoration ng (secondary)	Gas □ ≤1.5. □ Liquid Liquid □ Aque □ Susp Aque Solid □ Powo □ Solid □ Solid □ Abso □ Debri Matrix T	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous bended Solids/Aqueous bended Solids/Non- cous der/Ash/Dust ge brbed/Solidified Liquid is
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□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	me) Maste Category Inorganic Organic Organic Degreaser (see i Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mee Biological Beryllium Empty Contai Battery (see in Asbestos Friable PCB Source Co PCB < 50 ppr PCB >= 50 - < PCB >= 500 p Hazardous W Untreated Haz Commercial S	nstructions ee instruction rdous Was ontained-In cess dical ner (see instructions) ncentration s 500 ppm opm aste Conta zardous De Solid Waste	ons) te or Residue structions) in minated Soil	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Abateme ☐ Construct ☐ Decon/□ ☐ Investiga ☐ Orphan/ ☐ Remedia ☐ Repacki ☐ Unsched ☐ Houseke ☐ Spill Cle	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine anup (non-routine	Gas ≤1.5. ≥1.5. ≥1.5. ≥1.6 ≥1.6 ≥1.6 ≥1.7 ≥1.8 ≥1.8 ≥1.9 ≥	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous pended Solids/Aqueous pended Solids/Non- cous der/Ash/Dust ge probed/Solidified Liquid is Type (check only one) ogeneous
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	me) Maste Category cal Inorganic Organic Solvent (see i Degreaser (see Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mer Biological Beryllium Empty Contai Battery (see in Asbestos Friable Non-Friable PCB Source Co PCB < 50 ppr PCB >= 50 - < PCB >= 500 pr Hazardous W Untreated Haza	nstructions ee instruction rdous Was ontained-In cess dical ner (see instructions) ncentration s 500 ppm opm aste Conta zardous De Solid Waste	ons) te or Residue structions) in minated Soil	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Abateme ☐ Construct ☐ Decon/□ ☐ Investiga ☐ Orphan/ ☐ Remedia ☐ Repacki ☐ Unsched ☐ Houseke ☐ Spill Cle	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine anup (non-routine anup (non-routine roleum Tanks	Gas ≤1.5. ≥1.5. ≥1.5. ≥1.6 ≥1.6 ≥1.6 ≥1.7 ≥1.8 ≥1.8 ≥1.9 ≥	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous pended Solids/Aqueous pended Solids/Non- cous der/Ash/Dust ge probed/Solidified Liquid is Type (check only one) ogeneous
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	me) Maste Category Inorganic Organic Organic Degreaser (see i Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mee Biological Beryllium Empty Contai Battery (see in Asbestos Friable PCB Source Co PCB < 50 ppr PCB >= 50 - < PCB >= 500 p Hazardous W Untreated Haz Commercial S	nstructions ee instruction rdous Was ontained-In cess dical ner (see instructions) ncentration s 500 ppm opm aste Conta zardous De Solid Waste	ons) te or Residue structions) in minated Soil	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Decon/C ☐ Investiga ☐ Orphan/ ☐ Remedia ☐ Repacki ☐ Unsched ☐ Houseke ☐ Spill Cle ☐ Non-Pet	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine anup (non-routine roleum Tanks m Tanks	Gas ≤1.5. >1.5 >1.5 Liquid Aque Non Susp Aque Solid Powo Solid Abso Debri Matrix T Heter Heter	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas eous Aqueous ended Solids/Aqueous ended Solids/Non- eous der/Ash/Dust ge brbed/Solidified Liquid is Type (check only one) ogeneous rogeneous
□ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a □ Yes ☑ No ☑ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transurar Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	me) Maste Category Inorganic Organic Organic Degreaser (see i Dioxin RCA? Electroplating Treated Haza No-Longer Co Explosive Pro Infectious/Mee Biological Beryllium Empty Contai Battery (see in Asbestos Friable PCB Source Co PCB < 50 ppr PCB >= 50 - < PCB >= 500 p Hazardous W Untreated Haz Commercial S	nstructions ee instruction rdous Was ontained-In cess dical ner (see instructions) ncentration s 500 ppm opm aste Conta zardous De Solid Waste	ons) te or Residue structions) in minated Soil	Waste Sour ☐ Decon ☐ Materials ☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Samplin ☐ Other (d Waste Sour ☐ Decon/C ☐ Investiga ☐ Orphan/ ☐ Remedia ☐ Repacki ☐ Unsched ☐ Houseke ☐ Spill Cle ☐ Non-Pet ☐ Petroleu	s Processing/Prod h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine anup (non-routine roleum Tanks m Tanks	Gas ≤1.5. >1.5 >1.5 Liquid Aque Non Susp Aque Solid Powo Solid Abso Debri Matrix T Heter Heter	Atmospheres Pressure Atmospheres Pressure Atmospheres Pressure fied Compressed Gas cous Aqueous pended Solids/Aqueous pended Solids/Non- cous der/Ash/Dust ge probed/Solidified Liquid is Type (check only one) ogeneous

Section 3 - Process and Waste Description

Process Description:

I will prepare solutions A using dry chemicals as listed on DOC1. I will purchase Wolfe's mineral solution from ATCC and add that into my solution A.

I will prepare solution B as written in DOC1.

Both solutions will be filter sterilized and then combined. Shelf life of the combined solutions A and B is 3 weeks.

Waste Description:
The waste will be in liquid form and is a combination of solutions A and B plus a bacteria called Acidithiobacillus ferrooxidans ATCC 23270. The waste will be contained in a 2 gallon polycarbonate container.

Section 4 - Characteristics

Section 4 - Characteristics							
Ignitability (check only one)	Corrosi	vity (che	ck only oi	ne) (pH)	Reactivity (check as many as apply)	Boiling F	Point (check only one)
☑ < 73 F (< 22.8 C)	□<= 2.0		, ,	□ RCRA Unstable	□<= 95	5 F (<= 35 C)	
□ 73 - 99 F (22.8 - 37.2 C)	☑ 2.1 -	-			☐ Water Reactive		F (> 35 C)
□ 100 - 139 F (37.8 - 59.4 C)	4.1 -				☐ Cyanide Bearing		applicable
□ 140 - 200 F (60.0 - 99.3 C)	□ 6.1 -				☐ Sulfide Bearing	I INOLA	philoaple
	□ 6.1 - □ 9.1 -				☐ Pyrophoric		
□ > 200 (> 99.3 C)	-						
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive		
☐ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]		
DOT Oxidizer	⊔ Non-	aqueous			☑ Non-Reactive		
☐ Not Ignitable							
		·h a va ata vi-	ation Mat	had	Concentration of Conteminant		Т
		haracteriz	ation Met	None or	Concentration of Contaminant Contaminant present at	<u>S</u>	+
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory Limit
Toxicity Characteristic Metals	7.11	102	, iotai	iton dotoot	(10,000 ppm = 1%)		
Arsenic	$\overline{\mathbf{A}}$			V	, , , , , , , , , , , , , , , , , , , ,	ppm	5.0 ppm
Barium	<u> </u>			<u> </u>		ppm	100.0 ppm
Cadmium	<u> </u>			<u> </u>		ppm	1.0 ppm
Chromium	Ø			<u> </u>		ppm	5.0 ppm
Lead	<u> </u>			Ø		ppm	5.0 ppm
Mercury	Ø			Ø		ppm	0.2 ppm
Selenium	<u> </u>			_ ✓		ppm	1.0 ppm
Silver	<u> </u>		H	<u> </u>		ppm	5.0 ppm
Toxicity Characteristic Organics		. Ц			l to	ррпп	J.0 ppiii
Benzene	$\overline{\square}$			\square	to	ppm	0.5 ppm
Carbon tetrachloride	<u> </u>		H	V		ppm	0.5 ppm
Chlorobenzene	<u> </u>						
	<u> </u>			<u> </u>		ppm	100.0 ppm
Chloroform	<u> </u>	╁┼				ppm	6.0 ppm
Cresol						ppm	200.0 ppm
p-Cresol	<u> </u>			<u> </u>		ppm	200.0 ppm
m-Cresol	<u> </u>			<u> </u>		ppm	200.0 ppm
o-Cresol						ppm	200.0 ppm
1,4-Dichlorobenzene	☑		<u> </u>	<u> </u>		ppm	7.5 ppm
1,2-Dichloroethane	<u> </u>		무	☑		ppm	0.5 ppm
1,1-Dichloroethylene	<u> </u>		<u> </u>	☑		ppm	0.7 ppm
2,4-Dinitrotoluene	<u> </u>			☑		ppm	0.13 ppm
Hexachlorobenzene	Ø			☑		ppm	0.13 ppm
Hexachlorobutadiene	☑			☑		ppm	0.5 ppm
Hexachloroethane	☑			☑		ppm	3.0 ppm
Methyl ethyl ketone	☑			☑		ppm	200.0 ppm
Nitrobenzene	☑			☑		ppm	2.0 ppm
Pentachlorophenol	✓			☑		ppm	100.0 ppm
Pyridine	☑			☑		ppm	5.0 ppm
Tetrachloroethylene	\square			Ø		ppm	0.7 ppm
Trichloroethylene	\square			✓		ppm	0.5 ppm
2,4,6-Trichlorophenol	\square			☑		ppm	2.0 ppm
2,4,5-Trichlorophenol	\square			Ø	to	ppm	400.0 ppm
Vinyl chloride	\square			\square	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	V			$\overline{\checkmark}$	to	ppm	0.03 ppm
2,4-D				Ø		ppm	10.0 ppm
Endrin	$\overline{\mathbf{V}}$			Ø		ppm	0.02 ppm
Heptachlor (& its epoxide)	<u> </u>			<u> </u>		ppm	0.008 ppm
Lindane (gamma-BHC)	<u> </u>			<u> </u>		ppm	0.4 ppm
Methoxychlor	$\overline{\mathbf{V}}$			Ø		ppm	10.0 ppm
2,4,5-TP (Silvex)	<u> </u>			<u> </u>		ppm	1.0 ppm
Toxaphene	<u> </u>			<u> </u>		ppm	0.5 ppm
·						•	••

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (pp	m)	Maximum (ppm)
	Ammonium sulfate	8000	to	50000
	Iron sulfate heptahydrate	10000	to	100000
	Potassium phosphate monobasic	4000	to	50000
	Magnesium sulfate heptahydrate	30000	to	60000
	Water	10000	to	500000
	Manganese sulfate	5000	to	25000
	Sodium chloride	10000	to	50000
	Calcium chloride	1000	to	50000
	Zinc sulfate	1000	to	50000
	Copper sulfate	100	to	10000
	Aluminum potassium sulfate	100	to	10000
	Boric acid	100	to	10000
	Sodium molybdate	100	to	10000
	EDTA	5000	to	50000
	Nickel chloride	200	to	10000
	Sodium selenide	10	to	5000
	Sodium tungstate	100	to	10000
	Total of max. ranges of this section and page 2			105.00 in %
	e waste are compatible and no hazardous reaction is expected to occur.			
Flashpoint was dete Check pH before red	rmined by referencing MSDS's of constituents. questing a pick up.			
Flashpoint was dete Check pH before red - pH was verified by	rmined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal.			
Flashpoint was dete Check pH before red - pH was verified by section 6 - Work Co	ermined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. ntrol Documentation	omments)		
Flashpoint was dete Check pH before red - pH was verified by Section 6 - Work Co Do the procedures f	rmined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? If Yes No (provide co		r rem	noval of
Flashpoint was dete Check pH before rec - pH was verified by Section 6 - Work Co Do the procedures f	rmined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? Yes No (provide control of this process address controls to prevent changes to waste constituents and concentration		r rem	noval of
Flashpoint was dete Check pH before rec - pH was verified by ection 6 - Work Co Do the procedures f Do the procedures f waste to/from conta Comments:	ermined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? If Yes No (provide confort this process address controls to prevent changes to waste constituents and concentration iners? If Yes No (provide comments)		r rem	noval of
Flashpoint was dete Check pH before rec - pH was verified by section 6 - Work Co Do the procedures f Do the procedures f waste to/from conta Comments:	remined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? If Yes No (provide control of this process address controls to prevent changes to waste constituents and concentration iners? If Yes No (provide comments)		r rem	noval of
Flashpoint was dete Check pH before rec - pH was verified by ection 6 - Work Co Do the procedures f waste to/from conta Comments: ection 7 - Packagir Describe how the wa WASTE WILL BE PA	ermined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? If Yes No (provide confort this process address controls to prevent changes to waste constituents and concentration iners? If Yes No (provide comments)	ons or addition o		
Flashpoint was dete Check pH before rec - pH was verified by ection 6 - Work Co Do the procedures f Waste to/from conta Comments: ection 7 - Packagir Describe how the way WASTE WILL BE PA WITH THE WASTE. dentify the storage received.	remined by referencing MSDS's of constituents. questing a pick up. the generator and will be verified again prior to disposal. Introl Documentation for this process cover how to manage this waste? If Yes No (provide control in this process address controls to prevent changes to waste constituents and concentration in this process. If Yes No (provide comments) If yes No (provide comments)	ons or addition of		

Section 8 - Waste Certification Statements ☐ Waste appears to meet WAC attachment for: HAZ ☐ Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: Date: Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Date: Signature: RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Signature: Date:

ER Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of

Date:

Form 1346 (WCATS - R4) WS#49344

the applicable WAC.

Signature:

Attachment 4 - LDR and UHC

Labora		Pakad balans	(- 1114)	
	tify category and presence of any constituents		(equal to or above	e limit).	
	-Wastewater/Wastewater Category (check of Non Wastewater □ Wastewater [as de		CED 269 2/f\1	☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1
	fications and Certifications - Check the app			Lab Fack [40 CFR 200.2	2(1)] Sign Certification #1
	• •	mouble box			
	erator Requirements: This shipment contains hazardous waste conta	minated soil	that does not may	at traatment standards	Sign Certification #2
	This shipment contains nazardous waste conta This shipment contains untreated hazardous d				(No certification)
	Hazardous wastes (except soil) meeting treatm				Sign Certification #3
	Hazardous wastes contaminated soil meeting t				Sign Certification #4
	F or Generator Treatment:			generation.	
	TSDF treated hazardous debris meeting the a	Iternative trea	atment standards	of 40 CFR 268 45	Sign Certification #5
	Generator treated hazardous debris meeting t	he alternative	e treatment standa	ards of 40 CFR 268 45	Sign Certification #6
	Hazardous wastes contaminated soil treated to			140 01 10 01 11 200. 10	Sign Certification #7
	Wastes or residues from characteristic hazard			reatment standards and UTS	Sign Certification #8
	Wastes or residues from characteristic hazard				Sign Certification #9
	Other TSDF wastes meeting the more stringer	nt 40 CFR 26	8.40 treatment sta	andards to be land disposed	Sign Certification #10
	Other generator wastes meeting the more strii	ngent 40 CFF	R 268.40 treatmen	t standards to be land disposed	Sign Certification #11
				ardous Constituents	
	(Check the applicable underlying cons	tituents abov	e the concentration	n levels for D001 through D043 ch	aracterstic wastes only)
	lo Underlying Hazardous Constituents in th	nis waste str	eam.		
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
	Organic Constituents	CASRN	Standard (mg/L)	(mg/kg unless noted otherwise)	(mg/kg unless noted otherwise)
	Acenaphthene	83-32-9	0.059	3.4	34.0
	Acenaphthylene	208-96-8	0.059	3.4	34.0
	Acetone	67-64-1	0.28	160.0	1600.0
	Acetonitrile	75-05-8	5.6	38.0	380.0
	Acetophenone	98-86-2	0.01	9.7	97.0
				-	
<u>_</u>	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0
	Acrolein	107-02-8	0.29	N/A	N/A
	Acrylamide	79-06-1	19.0	23.0	230.0
	Acrylonitrile	107-13-1	0.24	84.0	840.0
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
	Aldrin	309-00-2	0.021	0.066	0.66
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
	Aniline	62-53-3	0.81	14.0	140.0
	o-Anisidine	90-04-0	0.01	0.66	6.6
	Anthracene	120-12-7	0.059	3.4	34.0
	Aramite	140-57-8	0.36	N/A	N/A
	alpha-BHC	319-84-6	0.00014	0.066	
	•				0.66
<u></u>	beta-BHC	319-85-7	0.00014	0.066	0.66
	delta-BHC	319-86-8	0.023	0.066	0.66
	Barban	101-27-9	0.056	1.4	14.0
	Bendiocarb	22781-23-3	0.056	1.4	14.0
	Benomyl	17804-35-2	0.056	1.4	14.0
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
	Benzal chloride	98-87-3	0.055	6.0	60.0
	Benzene	71-43-2	0.14	10.0	100.0
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	
					68.0
<u>_</u>	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
	Bromodichloromethane	75-27-4	0.35	15.0	150.0
	Bromomethane	74-83-9	0.11	15.0	150.0
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0
	Butylate	2008-41-5		1 4	14.0

□ Carbaryl

0.006

0.14

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7		1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
	Cyanide (Artieriable) Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
H	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
=	p,p'-DDD	72-54-8		0.087	
				0.087	0.87
	o,p'-DDE	3424-82-6			0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
<u>_</u>	p,p'-DDT Di-n-butyl phthalate	50-29-3 84-74-2		0.087	0.87
				28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1		6.0	60.0
	o-Dichlorobenzene	95-50-1		6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
	1,2-Dichloropropane	78-87-5	0.85	18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6	0.036	18.0	180.0
	sis 4.0 Dishlamannanulana	10061-01-5	0.036	18.0	180.0
	cis-1,3-Dichloropropylene	10001 01	0.000		10010
	Dieldrin	60-57-1		0.13	1.3

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
	Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endosulari sullate Endrin	72-20-8	0.0028	0.13	1.3
	Endrin aldehyde	7421-93-4	0.0028	0.13	1.3
	Ethyl acetate	141-78-6	0.025	33.0	330.0
	,				
	Ethyl benzene	100-41-4	0.057	10.0	100.0
무	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
	Ethylene oxide	75-21-8	0.12	N/A	N/A
	Famphur	52-85-7	0.017	15.0	150.0
	Fluoranthene	206-44-0	0.068	3.4	34.0
	Fluorene	86-73-7	0.059	3.4	34.0
	Fluoride	16984-48-8	35.0	N/A	N/A
	Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
	Hexachlorobenzene	118-74-1	0.055	10.0	100.0
	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
	Hexachloroethane	67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7	0.035	30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
	lodomethane	74-88-4	0.19	65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
H	Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
	Methacrylonitrile	126-98-7	0.24	84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5	0.081	1.5	15.0
	Methiocarb	2032-65-7	0.056	1.4	14.0
-	Methomyl	16752-77-5	0.028	0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
	Methyl methacrylate	80-62-6	0.14	160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3		5.6	56.0
	2-Naphthylamine	91-59-8		N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
<u> </u>	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0		0.28	2.8
	Parathion	56-38-2		4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
_	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
_	Pentachlorobenzene	608-93-5		10.0	100.0
	Pentachloroethane	76-01-7		6.0	60.0
	Pentachloronitrobenzene	82-68-8		4.8	48.0
	Pentachlorophenol	87-86-5		7.4	74.0
	Phenacetin Phenanthrene	62-44-2 85-01-8		16.0 5.6	160.0
					56.0
	Phenol 1,3-Phenylenediamine	108-95-2		6.2 N/A	62.0
	o-Phenylenediamine	108-45-2 95-54-5	N/A N/A	N/A N/A	N/A N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0		28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7		1.4	14.0
	Promecarb	2631-37-0		1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9		1.4	14.0
	Pyrene	129-00-0		8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1		7.9	79.0
	13.46 (WCATS PA)		inted 2/11/2021 10	•	Dage 9 of 10

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

44204 APPROVED

Waste Characterization Information	tior	١
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Waste Stream ID:	44204
WPF ID (Legacy):	
Waste Stream Name:	NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS
Expiration Date:	05/02/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	Nitric Acid
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	<u>W103</u>
	Inorganic Liquids: Spent concentrated acid (5% or more)
EPA Source Code:	G02
	Wastes from Ongoing Production and Service Processes: Stripping and acid or caustic cleaning (using caustics to remove coatings or layers from parts or

Waste Generation Estimates

YEAR	VOLUME
2020	0.50 L
2019	0.50 L
2018	8.00 L
2015	0.50 L
2014	0.50 L
2013	8.00 L

assemblies)



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
44204	

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z Nu	ımber	WMC's Name (pr	rint)	Generator's Phone
108963	GOODWIN, LYNNE	GOODWIN, LYNNE 3038		BEGAY,	RODGER	5056653763
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone
E549	MST-7	35		000213	В3	
Waste Accumulation (che	ck only one)			□ Control Accur	mulation Area S	ite No:
☐ Satellite Accumulation A	Area Site No	2117		□ NM Special W	nuiation Area S /aste S	ite No:
Less-than-90 Days Stor				☐ None of the A	hove S	ite No:
☐ TSDF	Site No:			☐ PCBs Storage	Area S	ite No:
☐ Universal Waste Storag	e Area Site No:			☐ Rad Staging A	Area S	ite No:
☐ Used Oil for Recycle				☐ Rad Storage	Area S	ite No:
ER Use Only						
☐ ER Site	SWMU/AOC No)				
Method of Characterization	on (check as many as apply)					
☐ Chemical/Physical Ana	lvsis □ Attac	ned Sa	imple No:			
☐ Radiological Analysis	□ Attac		imple No:			
☐ PCB Analysis	☐ Attac		ımple No:			
☑ Acceptable Knowledge	Documentation ☑ Attac	ned Documen	tation No: 7-3	5-213-B3-1		
☑ Material Safety Data Sh	neet (MSDS) ☑ Attac	ned	Nitr	ic acid SDS		
Section 1 - Waste Prevent	on/Minimization (answer all	questions)				
	limination, or material substitu			Yes (provide com	nments) 🗹	☑ No
	the waste stream be recycle			Yes (provide com		₫ No
· · · · · · · · · · · · · · · · · · ·	en incorporated into procedu			í Yes		No (provide comments)
Can this waste be generate	<u> </u>	•		Yes (provide com		No ☑ N/A
Comments:	-		_			
Comments.						
Section 2 - Chemical and F	Physical Information					
Waste Type (check only or	ne) Waste Category (che	eck all that apply)		rce (check only on		e Matrix (check only one)
☐ Unused/Unspent Chemi			Waste Sour	rce A	Gas	
☑ Process Waste/Spent	☐ Organic		Decon			.5 Atmospheres Pressure
Chemical/Other	☐ Solvent (see instr			s Processing/Prod		.5 Atmospheres Pressure
Radiological Information	□ Degreaser (see in	structions)		h/Development/Te ed Maintenance	esting 🗆 Lic	quified Compressed Gas
	□ Dioxin RCA? □ Electroplating			ee maintenance eeping - Routine	Liquid	d
Was Waste generated in a	☐ Treated Hazardou	e Wasta or Residua		anup - Routine	☑ Aa	ueous
☐ Yes ☑ No	□ No-Longer Contai			g - Routine Monito		n-Aqueous
☑ Non-radioactive	☐ Evplosive Process		☐ Other (d			spended Solids/Aqueous
☐ Radioactive - Low Leve	☐ Infectious/Medica					spended Solids/Non-
☐ Radioactive - Transurar	lic □ Biological					ueous
Waste Destination (check	D		Waste Sour	rce B	Solid	
Swws	☐ ☐ Empty Container		☐ Abateme			wydor/Ach/Duct
	☐ Battery (see instru	ıctions)		ction/Upgrades	·	wder/Ash/Dust
RLWTF	Asbestos		☐ Demoliti		□ So	
□ RLWTP	☐ Friable		☐ Decon/D	Decom	SIL	•
☐ TA-16/HE	☐ Non-Friable PCB Source Conce	ntration		ative Derived		sorbed/Solidified Liquid
□NTS	□ PCB < 50 ppm	iitiatioii	☐ Orphan/		☐ De	edris
Classified Information	□ PCB < 50 ppm) nnm		ation/Restoration	Matrix	x Type (check only one)
☑ Unclassified	□ PCB >= 500 ppm	, pp		ng (secondary)	☑ Ho	mogeneous
				duled Maintenance	·	•
☐ Classified/Sensitive		Contaminated Soil	I □ 111.	soning (new manufile	`/ □ He	eterogeneous
Li Classified/Sensitive	☐ Hazardous Waste ☐ Untreated Hazard		☐ Houseke	eeping (non-routine	∍)	eterogeneous
☐ Classified/Sensitive	☐ Hazardous Waste	ous Debris	☐ Spill Cle	anup (non-routine)	∍)	eterogeneous
Li Classified/Sensitive	☐ Hazardous Waste	ous Debris	☐ Spill Cle	anup (non-routine) roleum Tanks	∍)	terogeneous
Li Classified/Sensitive	☐ Hazardous Waste ☐ Untreated Hazard ☐ Commercial Solid	ous Debris	☐ Spill Cle☐ Non-Pet☐ Petroleu	anup (non-routine) roleum Tanks m Tanks)	, and the second
Li Classified/Sensitive	☐ Hazardous Waste ☐ Untreated Hazard ☐ Commercial Solid	ous Debris	☐ Spill Cle ☐ Non-Pet	anup (non-routine) roleum Tanks m Tanks)	nate Annual Volume (m³):

Section 3 - Process and Waste Des	cription							
Process Description: NITRIC ACID SOLUTION USED IN T	ARGET	FABRICA	TION OF	PERATIONS	S.			
Waste Description: NITRIC ACID AND WATER MIXTUR	E USED	FOR DIS	SOLVING	G COPPER				
Section 4 - Characteristics								
Ignitability (check only one)	Corrosi	vity (ched	ck only or	ne) (nH)	Reactivity (check as many as apply) Roiling F	Point (check only	(one)
□ < 73 F (< 22.8 C)	☑ <= 2.	• •	JK OIIIY OI	<i>ie)</i> (pi i)	☐ RCRA Unstable		F (<= 35 C)	y One)
□ 73 - 99 F (22.8 - 37.2 C)	2.1 -				☐ Water Reactive		(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	□4.1 -				☐ Cyanide Bearing		pplicable	
□ 140 - 200 F (60.0 - 99.3 C)	□6.1 -	9.0			☐ Sulfide Bearing			
□ > 200 (> 99.3 C)	□9.1 -				☐ Pyrophoric			
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive			
☐ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]			
□ DOT Oxidizer	⊔ Non-a	aqueous			☑ Non-Reactive			
☑ Not Ignitable								
	C	haracteriz	ation Met	hod	Concentration of Contaminan	te	I	
				None or	Contaminant present at		1	
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory	/ Limit
Toxicity Characteristic Metals Arsenic	Ø			V	(10,000 ppm = 1%) to	nnm	5.0	ppm
Barium	<u> </u>		-	_ ✓	to	ppm ppm	100.0	
Cadmium	Ø				to	ppm		ppm
Chromium	<u> </u>			<u> </u>	to	ppm		ppm
Lead	Ø			Ø	to	ppm	5.0	ppm
Mercury	✓			Ø	to	ppm		ppm
Selenium	Ø			<u> </u>	to	ppm		ppm
Silver Toxicity Characteristic Organics	$\overline{\mathbf{A}}$			✓	to	ppm	5.0	ppm
Benzene	V			V	to	ppm	0.5	ppm
Carbon tetrachloride	Ø			Ø	to	ppm		ppm
Chlorobenzene	<u> </u>			<u> </u>	to	ppm	100.0	
Chloroform	Ø			Ø	to	ppm	6.0	ppm
Cresol	☑			Ø	to	ppm		
p-Cresol	<u> </u>	<u> </u>		<u> </u>	to	ppm		
m-Cresol	<u> </u>			<u> </u>	to to	ppm	200.0	
o-Cresol 1,4-Dichlorobenzene	<u> </u>			<u> </u>	to	ppm ppm	200.0	ppm
1,2-Dichloroethane	<u>a</u>	H	H	Ø	to	ppm		ppm
1,1-Dichloroethylene	<u> </u>			<u> </u>	to	ppm		ppm
2,4-Dinitrotoluene	V			$\overline{\checkmark}$	to	ppm	0.13	
Hexachlorobenzene	Ø			Ø	to	ppm	0.13	
Hexachlorobutadiene	Ø	<u> </u>	<u> </u>	Ø	to	ppm		ppm
Hexachloroethane	<u> </u>			<u> </u>	to to	ppm		ppm
Methyl ethyl ketone Nitrobenzene	<u> </u>			<u> </u>	to	ppm ppm	200.0	ppm
Pentachlorophenol	Ø			Ø	to	ppm	100.0	
Pyridine	<u> </u>			<u> </u>	to	ppm		ppm
Tetrachloroethylene	Ø			V	to	ppm		ppm
Trichloroethylene	Ø			Ø	to	ppm		ppm
2,4,6-Trichlorophenol	<u> </u>			Ø	to	ppm		ppm
2,4,5-Trichlorophenol	<u> </u>	무	무	<u> </u>	to	ppm		
Vinyl chloride Herbicides and Pesticides	V			Ø	to	ppm	0.2	ppm
Chlordane	$\overline{\mathbf{A}}$			\square	to	ppm	0.03	ppm
2,4-D	<u> </u>			<u> </u>	to	ppm	10.0	
Endrin	$\overline{\mathbf{A}}$			Ø	to	ppm	0.02	
Heptachlor (& its epoxide)	$\overline{\mathbf{Q}}$			$\overline{\mathbf{A}}$	to	ppm	0.008	ppm
Lindane (gamma-BHC)	V			<u> </u>	to	ppm		ppm
Methoxychlor	<u> </u>	<u> </u>			to	ppm		
2,4,5-TP (Silvex)	<u> </u>			Image: second control of the control	to to	ppm		ppm
Toxaphene	_ <u>\</u> ₹_			<u> v</u>	ιU	ppm	0.5	ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppn	n) Maximum (ppm)
7732-18-5	Water	450000	to 550000
7697-37-2	Nitric acid		to 550000
7440-50-8	Copper	0	to 50000
	Total of max. ranges of this section and page 2		115.00 in %
	Additional Information		115.00 111 70
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form pro	vide it below
	n the waste are in a compatible container and no hazardous reaction is expected to occur.	on the form, pro	VIGO IL BOIOW
7 551.5414.511.5			
Section 6 - Work Cor	atrol Documentation		
	or this process cover how to manage this waste? ☑ Yes ☐ No (provide co	mments)	
waste to/from contain	or this process address controls to prevent changes to waste constituents and concentrationers? Yes No (provide comments)	ns or addition or	removal of
Comments:			
Section 7 - Packagin	g and Storage Control		
Describe how the wa	ste will be packaged in according to the applicable WAC.		
Waste will be stored	n poly containers that are compatible with waste.		
Identify the storage m	nanagement controls that will be used for this waste stream: (check all that apply)		
☐ Tamper Indication	Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☑ Oth	er (describe) AD	MINISTRATIVE CONT
Section 8 - Waste Ce	rtification Statements		
☑ Waste appears to r	neet WAC attachment for: HAZ		
☐ Waste stream need	ds exception/exemption for treatment, storage, or disposal.		
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Pr	inciple Associate	Director for
	s [PADWP] for assistance.) rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certi	fy that the waste	characterization
	m is correct and that it meets the requirements of the applicable waste acceptance criteria.		
	regulatory agencies and that there are significant penalties for submitting false information,		
imprisonment for know	ving violations.		
Signature: <u>LYNNE</u>	GOODWIN (108963) Date: 05/02/18 03:06 P	M	
Masta Managanant	A more real. I have no viscous data from and any constituted attack more and the set and standard		
	Approval: I have reviewed this form and any associated attachments and the characteriza irate. I certify, to the best of my knowledge, that the waste characterization information pro		
the requirements of the		Mada by the Mad	no gonorator mooto
Signature: CANDIE	ARELLANO (215926) Date: 05/02/18 03:12 P.	A.4	
Olgitature. CANDIE	ARELLANO (215926) Date: 05/02/18 03:12 P.	IVI	
RCRA Review: I have	e reviewed this form and any associated attachments and the characterization information	provided appears	to be complete and
	the best of my knowledge, that the waste characterization information provided by the was	te generator mee	ts the requirements of
the applicable WAC.			
Signature: ANDY E	LICIO (118692) Date: 05/02/18 03:37 P	M	

Attachment 4 - LDR and UHC

	/titadilliont i Ebit and	u 0110	
Identify category and presence of a	any constituents listed below (equal to or above lin	mit).	
Non-Wastewater/Wastewater Cat	egory (check only one)		
☐ Non Wastewater	astewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1
Notifications and Certifications -	Check the applicable boxes		
Generator Requirements:			
☐ This shipment contains hazarde	ous waste contaminated soil that does not meet tr	reatment standards	Sign Certification #2
☐ This shipment contains untreat	ed hazardous debris to be treated to 40 CFR 268.	.45 treatment standards	(No certification)
☐ Hazardous wastes (except soil	meeting treatment standards at point of generati	on	Sign Certification #3
☐ Hazardous wastes contaminate	ed soil meeting treatment standards at point of ge	neration	Sign Certification #4
TSDF or Generator Treatment:			
☐ TSDF treated hazardous debri	s meeting the alternative treatment standards of	40 CFR 268.45	Sign Certification #5
☐ Generator treated hazardous of	lebris meeting the alternative treatment standards	s of 40 CFR 268.45	Sign Certification #6
☐ Hazardous wastes contaminat	ed soil treated to 40 CFR 268.49		Sign Certification #7
☐ Wastes or residues from chara	cteristic hazardous waste treatment meeting trea	tment standards and UTS	Sign Certification #8
☐ Wastes or residues from chara	cteristic hazardous waste treatment not meeting	UTS	Sign Certification #9
☐ Other TSDF wastes meeting the	ne more stringent 40 CFR 268.40 treatment stand	lards to be land disposed	Sign Certification #10
☐ Other generator wastes meeting	ng the more stringent 40 CFR 268.40 treatment st	tandards to be land disposed	Sign Certification #11
	Notification of Underlying Hazard	lous Constituents	

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

ΔV	lo Underlying Hazardous Constituents in th	is waste stı			
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
	Organic Constituents			(mg/kg unless noted otherwise)	
	Acenaphthene	83-32-9		3.4	34.0
	Acenaphthylene	208-96-8		3.4	34.0
	Acetone	67-64-1	0.28	160.0	1600.0
	Acetonitrile	75-05-8		38.0	380.0
	Acetophenone	98-86-2		9.7	97.0
	2-Acetylaminofluorene	53-96-3		140.0	1400.0
	Acrolein	107-02-8		N/A	N/A
	Acrylamide	79-06-1	19.0	23.0	230.0
	Acrylonitrile	107-13-1	0.24	84.0	840.0
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
	Aldrin	309-00-2	0.021	0.066	0.66
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
	Aniline	62-53-3	0.81	14.0	140.0
	o-Anisidine	90-04-0	0.01	0.66	6.6
	Anthracene	120-12-7	0.059	3.4	34.0
	Aramite	140-57-8	0.36	N/A	N/A
	alpha-BHC	319-84-6	0.00014	0.066	0.66
	beta-BHC	319-85-7	0.00014	0.066	0.66
	delta-BHC	319-86-8	0.023	0.066	0.66
	Barban	101-27-9	0.056	1.4	14.0
	Bendiocarb	22781-23-3	0.056	1.4	14.0
	Benomyl	17804-35-2	0.056	1.4	14.0
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
	Benzal chloride	98-87-3	0.055	6.0	60.0
	Benzene	71-43-2	0.14	10.0	100.0
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
	Bromodichloromethane	75-27-4	0.35	15.0	150.0
	Bromomethane	74-83-9	0.11	15.0	150.0
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0
	Butylate	2008-41-5	0.042	1.4	14.0
	Carbaryl	63-25-2		0.14	1.4

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
_	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
-	2,6-Dichlorophenol	87-65-0		14.0	140.0
	·				
	1,2-Dichloropropane	78-87-5		18.0	180.0
<u>-</u>	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
<u></u>	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
<u>-</u>	Dieldrin Diethologe	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3		28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7		N/A	N/A
	Disulfoton	298-04-4		6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4		1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9		0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
	Ethyl acetate	141-78-6		33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7		160.0	1600.0
	Ethyl methacrylate	97-63-2		160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8		0.066	0.66
	Heptachlor epoxide	1024-57-3		0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
_	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
	Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
		87-68-3		5.6	56.0
	Hexachlorocyclopentadiene Hexachloroethane	77-47-4		2.4	24.0
		67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7		30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8 55684-94-1		0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	193-39-5	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene lodomethane	74-88-4		3.4 65.0	34.0 650.0
	Isobutyl alcohol	74-88-4 78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.021	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
	Methanol	67-56-1		0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.14	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
$\overline{}$	13.46 (WCATS PA)		into d 2/11/2021 10	-	Page 6 of 0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
H	Parathion	56-38-2	0.036	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
H	Pentachloronitrobenzene	82-68-8		4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
H	Phenacetin	62-44-2	0.089	16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
_	Phenol 1.2 Phanulanadiamina	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
-	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
므	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
Coun	1346 (WCATS - R4)	n ·	nted 2/11/2021 10.	00.52414	Page 7 of 9

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



CONTAINER PROFILE W849416 CON-HAZ

WS ID: 44204 C ID: 849416 ACTIVE

GENERAL INFORMATION

Container ID: 849416

Labeled ID: W849416

Optional ID:

Chemical Barcode:

Physical State: LIQUID Waste Stream ID: 44204

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned:

Container Type: CF: Fiber or plastic boxes, cartons, cases

Container Subtype: Cardboard Box

Origin Date: 05-Mar-2019 11:07 am

YES

Accum Start Date: 05-Mar-2019

Closed Date:

Discard Matrix:

TID(s):

3P030A

Code

Gen Contact: LYNNE GOODWIN (108963)
Insert By: CANDIE ARELLANO (215926)

Waste Desc: NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS

100.00

Waste Description & Treatment Subcategory

WEIGHTS AND VOLUMES

Container Volume: NOT SPECIFIED Gross Weight: 12.10 lb

Waste Volume: 2.00 L Tare Weight: 3.40 lb

Net Weight: 8.70 lb

LOCATION

Pickup (Origin): LANL: 35: 000213

J4WM

Waste No.

Current: VEOLIA-CO: OPER: RECV

0000

				COS	ST CODES			
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode	

		ED4 000E0	
		EPA CODES	
System	Hazardous		

ACTIVE

ACTIVE

SELECTION LIST

D002A D002 Corrosive: Corrosive Characteristic Wastes

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DOT SHIPPING DESC				
Status/ Manifest IDs	DOT Shipping Description			
ACTIVE 107553 107769	UN2031, WASTE NITRIC ACID SOLUTION, 8, II, (LABPACK)			
INACTIVE	UN1826. WASTE NITRATING ACID MIXTURES SPENT. 8. II			



CONTAINER PROFILE W849416 CON-HAZ

WS ID: 44204 C ID: 849416 ACTIVE

	TASK HISTORY					
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject			
03/06/2019 10:20 AM	1881036 EXECUTED	LANL:35 - WDR-NRAD	NO			
03/27/2019 1:56 PM	1881686 PENDING	LANL:35 - WALL2W	NO			
04/03/2019 2:54 PM	1881788 EXECUTED	LANL:35 » 60:000017 (MANIF ID: 107553)	NO			
05/28/2019 12:12 PM	1883676 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 107769)	NO			

Note: Highlighted row indicates container was output or receiving container for the indicated task

	DOCUMENTATION	
Doc. Number	Title	Uploaded By
N/A	05G-HDPE-Pail-PO-2017-202-WR1	CANDIE ARELLANO (215926)
N/A	W849416	CANDIE ARELLANO (215926)

COMMENTS				
Date Time/ User Name	Comment			
05/21/2019 9:00 AM PAUL NEWBERRY (112056)	1 x 1L bottle in 4G box			
03/05/2019 11:11 AM CANDIE ARELLANO (215926)	5 gallon OH pail contains: 2 - 1 Liter plastic bottles of waste, full.			

	EDIT LOG				
Date Time/ User Name	Quality Record	Explanation			
05/21/2019 9:00 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=849416]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: comment			
05/21/2019 6:41 AM PAUL NEWBERRY (112056)	YES	C_MASTER.VOL_CONTAINER_UNIT [849416] changed from gal to L			
05/21/2019 6:41 AM PAUL NEWBERRY (112056)	YES	C_MASTER.VOL_CONTAINER [849416] changed from 5.0 to 0.0			
05/21/2019 6:41 AM PAUL NEWBERRY (112056)	YES	C_MASTER.CONTAINER_SUBTYPE_ID [849416] changed from 31 to 85			
05/21/2019 6:40 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=849416]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: packaging			
03/06/2019 9:06 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=849416]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn			
03/05/2019 11:12 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_WASTE [849416] changed from 4.096 to 8.7			
03/05/2019 11:12 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_GROSS [849416] changed from 7.496 to 12.1			
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.VOL_WASTE [849416] changed from null to 2.0			



CONTAINER PROFILE W849416 CON-HAZ

WS ID: 44204 C ID: 849416 ACTIVE

EDIT LOG				
Date Time/ User Name	Quality Record	Explanation		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_WASTE [849416] changed from 1.858 to 4.096		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_WASTE_UNIT [849416] changed from kg to lb		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_WASTE [849416] changed from 0.0 to 1.858		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_TARE_UNIT [849416] changed from kg to lb		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_GROSS [849416] changed from 3.4 to 7.496		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_GROSS [849416] changed from 0.0 to 3.4		
03/05/2019 11:10 AM CANDIE ARELLANO (215926)	YES	C_MASTER.WEIGHT_TARE [849416] changed from 0.0 to 3.4		
03/05/2019 11:08 AM CANDIE ARELLANO (215926)	NO	Create Container Authorization; Looking for [P=448452, WS=44204, WP=233, U=462]; Found [P=448452, W=1, F=50, U=ALL, B=2, G=35-WMC];		
03/05/2019 11:08 AM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=849416/PATH_ID=233): PASSED		



CONTAINER PROFILE W850678 **CON-HAZ**

WS ID: 44204 C ID: 850678 Opt ID: rpk of W849416

ACTIVE

GENERAL INFORMATION

Container ID: 850678 Labeled ID: W850678

Optional ID: rpk of W849416

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 44204

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO Status:

ACTIVE

YES Decommissioned:

Container Type: CF: Fiber or plastic boxes, cartons, cases

Container Subtype: Cardboard Box

Origin Date: 21-May-2019 8:54 am

6.00 lb

Accum Start Date: 05-Mar-2019

Closed Date:

Discard Matrix:

Waste Volume:

TID(s):

Gen Contact: PAUL NEWBERRY (112056) Insert By: PAUL NEWBERRY (112056)

Waste Desc: NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS

WEIGHTS AND VOLUMES

Container Volume: NOT SPECIFIED Gross Weight:

> 1.00 L **Tare Weight:** 2.50 lb

Net Weight: 3.50 lb

LOCATION

Pickup (Origin): LANL: 60: 000017

D002

Current: VEOLIA-CO: OPER: RECV

COST CODES

Cost Prog Cost Work Percent Cost Center **Cost Code** Code Center Account **Package** Allocation **Status Status Recharge Mode**

SELECTION LIST

EPA CODES

Hazardous System Waste No. **Waste Description & Treatment Subcategory** Code

Corrosive: Corrosive Characteristic Wastes

DOT SHIPPING DESC

Status/

D002A

Manifest IDs DOT Shipping Description

ACTIVE UN2031, WASTE NITRIC ACID SOLUTION, 8, II, (LABPACK)

107789



CONTAINER PROFILE W850678 **CON-HAZ**

WS ID: 44204 C ID: 850678 Opt ID: rpk of W849416

ACTIVE

	TASK HISTORY				
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject		
05/28/2019 7:02 AM	1883699 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 107789)	NO		

Note: Highlighted row indicates container was output or receiving container for the indicated task

COMMENTS					
Date Time/ User Name	Comment				
05/21/2019 8:59 AM PAUL NEWBERRY (112056)	1 x 1 liter bottle in 4G box				
	EDIT LOG				
Date Time/ User Name	Quality Record Explanation				



CONTAINER PROFILE W853362 CON-HAZ

WS ID: 44204 C ID: 853362 ACTIVE

GENERAL INFORMATION

Container ID: 853362

Labeled ID: W853362

Optional ID:

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 44204

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

7.5...

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 5-gallon poly

Origin Date: 16-Sep-2019 1:40 pm

Accum Start Date: 16-Sep-2019

Closed Date:

Discard Matrix:

108322 108493

TID(s):

Gen Contact: LYNNE GOODWIN (108963)
Insert By: RODGER BEGAY (303896)

Waste Desc: NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS

WEIGHTS AND VOLUMES

Container Volume: 5.00 gal Gross Weight: 15.50 lb

Waste Volume: 3.00 L Tare Weight: 3.40 lb

Net Weight: 12.10 lb

LOCATION

Pickup (Origin): LANL: 35: 000213: C107

Current: VEOLIA-CO: OPER: RECV

COST CODES							
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
3P030A	J4WM	0000	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST

		EPA CODES
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory

D002A D002 Corrosive: Corrosive Characteristic Wastes

	DOT SHIPPING DESC				
Status/	Status/				
Manifest IDs	DOT Shipping Description				
ACTIVE	UN2031, WASTE NITRIC ACID, 8, II, (LABPACK)				



CONTAINER PROFILE W853362 CON-HAZ

WS ID: 44204 C ID: 853362 ACTIVE

	TASK HISTORY				
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject		
09/16/2019 4:10 PM	1888586 EXECUTED	LANL:35 - WDR-NRAD	NO		
09/30/2019 3:43 PM	1889129 EXECUTED	LANL:35 » 60:000017 (MANIF ID: 108322)	NO		
10/11/2019 11:23 AM	1875716 EXECUTED	LANL:60 - WALL2W - 000017	NO		
10/15/2019 2:31 PM	1875823 EXECUTED	LANL:60 - WALL2W - 000017	NO		
10/28/2019 1:14 PM	1875825 PENDING	LANL:60 - WALL2W - 000017	NO		
11/05/2019 10:44 AM	1890527 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 108493)	NO		

Note: Highlighted row indicates container was output or receiving container for the indicated task

DOCUMENTATION						
Doc. Number	Title	Uploaded By				
N/A	Container Use and Closure Checklist	RODGER BEGAY (303896)				
N/A	Container Inventory	RODGER BEGAY (303896)				
N/A	05G-HDPE-Pail-PO-2017-202-WR1	RODGER BEGAY (303896)				

		EDIT LOG
Date Time/ User Name	Quality Record	Explanation
09/16/2019 4:11 PM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=853362]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn
09/16/2019 1:42 PM RODGER BEGAY (303896)	NO	Create Container Authorization; Looking for [P=1715019, WS=44204, WP=233, U=462]; Found [P=1715019, W=1, F=50, U=ALL, B=2, G=35-WMC];
09/16/2019 1:42 PM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=853362/PATH_ID=233): PASSED



CONTAINER PROFILE W858199 CON-HAZ

WS ID: 44204 C ID: 858199 ACTIVE

GENERAL INFORMATION

Container ID: 858199

Labeled ID: W858199

Optional ID:

Chemical Barcode:

Physical State: LIQUID
Waste Stream ID: 44204

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status:

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 5-gallon poly

Origin Date: 16-Jul-2020 11:55 am

ACTIVE

Accum Start Date: 09-Jul-2020

Closed Date:

Discard Matrix:

TID(s): (#1) 884215

Gen Contact: RODGER BEGAY (303896)
Insert By: RODGER BEGAY (303896)

Waste Desc: NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS

WEIGHTS AND VOLUMES

Container Volume: 5.00 gal Gross Weight: 24.60 lb

Waste Volume: 11.00 L Tare Weight: 2.50 lb

Net Weight: 22.10 lb

LOCATION

Pickup (Origin): LANL: 35: 000213: C107

Current: VEOLIA-CO: OPER: RECV

COST CODES

	0001 00DL0							
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode	
3P030A	J4WM	0000	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST	

			ES

System Hazardous
Code Waste No. Waste Description & Treatment Subcategory

D002A D002 Corrosive: Corrosive Characteristic Wastes

DOT SHIPPING DESC

Status/ Manifest IDs

DOT Shipping Description

ACTIVE UN2031, WASTE NITRIC ACID SOLUTION, 8, II, (LABPACK)

109438 109470

INACTIVE UN2031, NITRIC ACID, 8, II, (LABPACK)



CONTAINER PROFILE W858199 CON-HAZ

WS ID: 44204 C ID: 858199 ACTIVE

		TASK HISTORY	
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject
07/21/2020 11:04 AM	1900321 EXECUTED	LANL:35 - WDR-NRAD	NO
07/27/2020 9:56 AM	1900335 EXECUTED	LANL:35 » 60:000017 (MANIF ID: 109438)	NO
07/27/2020 11:50 AM	1881173 PENDING	LANL:60 - WALL2W - 000017	NO
07/27/2020 12:21 PM	1881175 PENDING	LANL:60 - WALL2W - 000017	NO
08/18/2020 11:15 AM	1901006 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 109470)	NO

Note: Highlighted row indicates container was output or receiving container for the indicated task

DOCUMENTATION					
Doc. Number	Title	Uploaded By			
N/A	Container Use And Closure Checklist	RODGER BEGAY (303896)			
N/A	Container inventory	RODGER BEGAY (303896)			
N/A	05G-HDPE-Pail-PO-2017-202-WR1	RODGER BEGAY (303896)			

EDIT LOG						
Date Time/ User Name	Quality Record	Explanation				
07/21/2020 11:04 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=858199]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn				
07/21/2020 10:52 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=858199]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn				
07/21/2020 10:22 AM RODGER BEGAY (303896)	YES	C_MASTER.ACCUM_START_DATETIME [858199] changed from null to 07-09-2020 10:21 AM				
07/21/2020 10:21 AM RODGER BEGAY (303896)	NO	Edit Container Authorization; Looking for [P=1715019, C=858199]; Found [P=1715019, W=1, F=50, U=ALL, B=1, G=35-GEN]; Reason for Edit: edit				
07/16/2020 12:03 PM RODGER BEGAY (303896)	YES	C_MASTER.PADLOCK_1 [858199] changed from null to 884215				
07/16/2020 11:57 AM RODGER BEGAY (303896)	NO	Create Container Authorization; Looking for [P=1715019, WS=44204, WP=233, U=462]; Found [P=1715019, W=1, F=50, U=ALL, B=1, G=35-GEN];				
07/16/2020 11:57 AM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=858199/PATH_ID=233): PASSED				



CONTAINER PROFILE W858200 **CON-HAZ**

WS ID: 44204 C ID: 858200 **ACTIVE**

GENERAL INFORMATION

Container ID: 858200

Labeled ID: W858200

Optional ID:

Chemical Barcode:

Physical State: LIQUID Waste Stream ID: 44204

Work Path: CON-HAZ

Quantity (Univ):

Compactible: NO **ACTIVE**

Status:

Decommissioned: YES

DF: Fiberboard or plastic drums, barrels, kegs **Container Type:**

Container Subtype: 5-gallon poly

Origin Date: 16-Jul-2020 11:57 am

Accum Start Date: 09-Jul-2020

Closed Date:

Discard Matrix:

TID(s): (#1) 884216

Gen Contact: RODGER BEGAY (303896) Insert By: RODGER BEGAY (303896)

NITRIC ACID SOLUTION USED IN TARGET FABRICATION OPERATIONS Waste Desc:

WEIGHTS AND VOLUMES

Container Volume: 5.00 gal **Gross Weight:** 16.40 lb

Waste Volume: 6.00 L **Tare Weight:** 2.50 lb

> **Net Weight:** 13.90 lb

LOCATION

Pickup (Origin): LANL: 35: 000213: C107

Current: VEOLIA-CO: OPER: RECV

COST CODES							
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
3P030A	J4WM	0000	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST

		EPA CODES
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory

D002A D002 Corrosive: Corrosive Characteristic Wastes

	DOT SHIPPING DESC						
Status/ Manifest IDs	DOT Shipping Description						
ACTIVE 109438 109470	UN2031, WASTE NITRIC ACID SOLUTION, 8, II, (LABPACK)						
INACTIVE	UN2031, WASTE NITRIC ACID, 8, II, (LABPACK)						



CONTAINER PROFILE W858200 CON-HAZ

WS ID: 44204 C ID: 858200 ACTIVE

		TASK HISTORY	
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject
07/21/2020 11:04 AM	1900321 EXECUTED	LANL:35 - WDR-NRAD	NO
07/27/2020 9:56 AM	1900335 EXECUTED	LANL:35 » 60:000017 (MANIF ID: 109438)	NO
07/27/2020 11:50 AM	1881173 PENDING	LANL:60 - WALL2W - 000017	NO
07/27/2020 12:21 PM	1881175 PENDING	LANL:60 - WALL2W - 000017	NO
08/18/2020 11:15 AM	1901006 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 109470)	NO

Note: Highlighted row indicates container was output or receiving container for the indicated task

DOCUMENTATION					
Doc. Number	Title	Uploaded By			
N/A	Container Use And Closure Checklist	RODGER BEGAY (303896)			
N/A	Container Inventory	RODGER BEGAY (303896)			
N/A	05G-HDPE-Pail-PO-2017-202-WR1	RODGER BEGAY (303896)			

EDIT LOG								
Date Time/ User Name	Quality Record	Explanation						
07/21/2020 11:03 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=858200]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn						
07/21/2020 10:22 AM RODGER BEGAY (303896)	YES	C_MASTER.ACCUM_START_DATETIME [858200] changed from null to 07-09-2020 10:22 AM						
07/21/2020 10:22 AM RODGER BEGAY (303896)	NO	Edit Container Authorization; Looking for [P=1715019, C=858200]; Found [P=1715019, W=1, F=50, U=ALL, B=1, G=35-GEN]; Reason for Edit: edit						
07/16/2020 12:03 PM RODGER BEGAY (303896)	YES	C_MASTER.PADLOCK_1 [858200] changed from null to 884216						
07/16/2020 11:58 AM RODGER BEGAY (303896)	NO	Create Container Authorization; Looking for [P=1715019, WS=44204, WP=233, U=462]; Found [P=1715019, W=1, F=50, U=ALL, B=1, G=35-GEN];						
07/16/2020 11:58 AM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=858200/PATH_ID=233): PASSED						

Attachment 3

Resonant Acoustic Mixing (RAM)

Waste Stream Profiles 42360 and 46444 and Container Profiles W824418, W824459, W847940, W847943, W850988, and W855901



WASTE PROFILE FORM COVER SHEET

42360 APPROVED

	۷	Vaste	Characterization	Information
--	---	-------	------------------	-------------

Waste Stream ID:	42360
WPF ID (Legacy):	
Waste Stream Name:	SOLVENT WATER MIXTURE FROM PBX SLURRY PROCESS (OTHER THAN PBX 9501) FILTRATE FROM PROCESS WITH TRACE ENERGETIC MATERI
Expiration Date:	10/19/2019
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Chemical
Composition (other):	
EPA Codes:	D001 F003 F005
Waste Acceptance:	
EPA Form Code:	W203
	Organic Liquids: Concentrated non-halogenated (e.g., non-chlorinated) solvent
EPA Source Code:	G19
	Other Intermittent Events or Processes: Other one-time or intermittent processes (specify in comments)

Waste Generation Estimates

YEAR	VOLUME
2019	5.00 gal
2018	5.00 gal
2017	5.00 gal
2016	5.00 gal
2015	5.00 gal



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
42360	

Generator's Z Number	Waste Generate	te Generator's Name (print) WMC's Z				WMC's Name (print)			Generator's Phone
198732	FRANCOIS	RANCOIS, ELIZABETH 169		004	GONZALES, PAUL		5056678498		
Generator's Mail Stop	Waste Generati	ng Group	Waste	e Stream Tech	nnical Area	Building	Room		WMC Phone
C920	M-7	,		09		000037	10)1	5056658812
Waste Accumulation (che	eck only one)		1			П О t		Cito	No
☑ Satellite Accumulation A	,	Site No.	125			☐ NM Special W			No:
Less-than-90 Days Stor						☐ None of the A			No:
□TSDF	9	Site No	:			☐ PCBs Storage	e Area	Site	No:
☐ Universal Waste Storag	je Area	Site No	·			☐ Rad Staging /		Site	No:
☐ Used Oil for Recycle		Site No				☐ Rad Storage	Area	Site	No:
ER Use Only	0.1								
☐ ER Site		VMU/AOC No	o						
Method of Characterization	•								
☐ Chemical/Physical Ana	lysis	☐ Attac			mple No:				
☐ Radiological Analysis ☐ PCB Analysis		□ Attac □ Attac			mple No: mple No:				
☐ Acceptable Knowledge	Documentation	☐ Attac		Document					
☑ Material Safety Data SI		☑ Attac	hed			SDS/See Documents			
Section 1 - Waste Prevent	ion/Minimizatio	n (answer all	auestia	nns)					
Can hazard segregation, e			•		Г	Yes (<i>provide com</i>	nments)	✓N	0
Can any of the materials in						Yes (<i>provide com</i>		✓N	
Has waste minimization be						☑ Yes			o (provide comments)
Can this waste be generat	· · · · · · · · · · · · · · · · · · ·					Yes (<i>provide com</i>	nments)	□N	
Comments:									
0 41 0 01 1 1	Discord 1 lock	-41							
Section 2 - Chemical and I			111-	(11	W4- 0		- \	M/4- N	-4-1 (-bbb
Waste Type (check only of	·	ategory (che	еск ан т	пат арріу)	Waste Sou Waste Sou	rce (check only on rce A	·	vvaste ivi Gas	atrix (check only one)
☐ Unused/Unspent Chem ☑ Process Waste/Spent	lcai ☐ Inorg				☐ Decon				Atmospheres Pressure
Chemical/Other		ent (see instr	uctions)		ls Processing/Prod	uction		Atmospheres Pressure
		easer (see ir	structio	ons)		ch/Development/Te	esting		ed Compressed Gas
Radiological Information	_					led Maintenance		Liquid	•
Was Waste generated in a		roplating	ıo \//oo	te or Residue	_	eeping - Routine eanup - Routine		☐ Aque	ous
☐ Yes ☑ No		onger Conta		le oi Nesidue		ig - Routine Monito	rina	□ Non-A	
✓ Non-radioactive ☐ Radioactive - Low Leve	VI Eval	osive Proces			☐ Other (c		9		ended Solids/Aqueous
☐ Radioactive - Low Leve	_ ∐ Infec	tious/Medica	l					☐ Suspe	ended Solids/Non-
Tradioactive - Transular	☐ Biolo							Aque	ous
Waste Destination (check	one)	llium ty Container	(soo in	etructions)	Waste Sou			Solid	
□swws		ery (see instru			☐ Abatem			☐ Powd	er/Ash/Dust
☐ RLWTF	Asbest		aotiono,	,	☐ Constru	ction/Upgrades		\square Solid	
□ RLWTP	☐ Friab				☐ Demont			☐ Sludg	
☐ TA-16/HE	□ Non-					ative Derived			bed/Solidified Liquid
□NTS		ource Conce	ntratio	on	☐ Orphan	/Legacy		☐ Debri	S
Classified Information		< 50 ppm >= 50 - < 50	0 ppm			ation/Restoration		Matrix T	ype (check only one)
☑ Unclassified		>= 500 ppm			□ Kepack □ Upscho	ing (secondary) duled Maintenance	,	□ Homo	geneous
☐ Classified/Sensitive	☐ Haza	irdous Waste	Conta	minated Soil		eeping (non-routing		☑ Heter	ogeneous
		eated Hazard				eanup (non-routine)			
		mercial Solid r [Describe]	waste		☐ Non-Pe	troleum Tanks			
		· [Describe]			Petroleu		<u> </u>		
					│ □ Other (c	iescine)		∟stimate	Annual Volume (m³):
	Other:				Other:				

Section 3 - Process and Waste Des	cription							
Process Description: SOLVENT AND WATER MIXTURE F SUSPENDED IN LIQUID MIXTURE.	ROM PB	X SLURF	RY PROC	CESS (OTH	ER THAN PBX 9501) FILTRATE FRO	OM PROCI	ESS WITH TRAC	CE HE
Waste Description:								
Waste will include PBX, organic solve	ents and v	water.						
Section 4 - Characteristics								
Ignitability (check only one)	Corrosi	vity (ched	ck only or	ne) (pH)	Reactivity (check as many as apply,	Boiling F	Point (check only	v one)
☑ < 73 F (< 22.8 C)	□<= 2.0	• (on only of	70) (PI I)	☐ RCRA Unstable		F (<= 35 C)	, 0110)
□ 73 - 99 F (22.8 - 37.2 C)	2.1 - 4				☐ Water Reactive		(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	□4.1 - (☐ Cyanide Bearing		pplicable	
□ 140 - 200 F (60.0 - 99.3 C)	☑ 6.1 - 9	9.0			☐ Sulfide Bearing			
□ > 200 (> 99.3 C)	□ 9.1 -				☐ Pyrophoric			
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive			
☐ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]			
□ DOT Oxidizer	⊔ Non-a	aqueous			☑ Non-Reactive			
☐ Not Ignitable								
	С	haracteriz	ation Met		Concentration of Contaminan	ts		
Identify for all contaminants listed	AK	TCLP	Total	None or Non-detect	Contaminant present at Minimum Maxiumum		Regulatory	/ Limit
Toxicity Characteristic Metals	AN	ICLP	Total	Non-detect	(10,000 ppm = 1%)		gaa.o.,	
Arsenic	$\overline{\mathbf{A}}$			V	to	ppm	5.0	ppm
Barium	Ø			Ø	to	ppm	100.0	ppm
Cadmium	☑			✓	to	ppm		ppm
Chromium	☑			☑	to	ppm		ppm
Lead	<u> </u>			<u> </u>	to	ppm		ppm
Mercury Selenium	<u> </u>			<u> </u>	to to	ppm		ppm ppm
Silver	<u> </u>			<u> </u>	to	ppm ppm		ppm
Toxicity Characteristic Organics						ppiii	0.0	ppiii
Benzene	V			V	to	ppm		ppm
Carbon tetrachloride	Ø				to	ppm	0.5	ppm
Chlorobenzene	☑			<u> </u>	to	ppm	100.0	
Chloroform	<u> </u>			☑	to	ppm		ppm
Cresol p-Cresol	<u> </u>			<u> </u>	to to	ppm ppm		
m-Cresol	Ø	H	H	<u> </u>	to	ppm	200.0	
o-Cresol	Ø			<u> </u>	to	ppm	200.0	
1,4-Dichlorobenzene	4			<u> </u>	to	ppm		ppm
1,2-Dichloroethane	Ø			Ø	to	ppm		ppm
1,1-Dichloroethylene	Ø			Ø	to	ppm		ppm
2,4-Dinitrotoluene	Ø	<u> </u>		<u> </u>	to	ppm	0.13	
Hexachlorobenzene Hexachlorobutadiene	<u> </u>			<u> </u>	to to	ppm ppm	0.13	ppm
Hexachloroethane	<u> </u>			<u> </u>	to	ppm		ppm
Methyl ethyl ketone	Ø			Ø	to	ppm	200.0	
Nitrobenzene	<u> </u>			<u> </u>	to	ppm		ppm
Pentachlorophenol	Ø			V	to	ppm	100.0	
Pyridine	Ø			Ø	to	ppm		ppm
Tetrachloroethylene	☑			☑	to	ppm		ppm
Trichloroethylene	Ø			Ø	to	ppm		ppm
2,4,6-Trichlorophenol 2,4,5-Trichlorophenol	<u> </u>			<u> </u>	to to	ppm		ppm
Vinyl chloride				<u> </u>	to	ppm ppm		ppm ppm
Herbicides and Pesticides						PP111	0.2	Ph
Chlordane	V			$\overline{\mathbf{V}}$	to	ppm	0.03	ppm
2,4-D	$\overline{\mathbf{A}}$			$\overline{\mathbf{A}}$	to	ppm	10.0	
Endrin	$\overline{\Delta}$			V	to	ppm	0.02	
Heptachlor (& its epoxide)	Ø			☑	to	ppm	0.008	
Lindane (gamma-BHC)	Ø			<u> </u>	to	ppm		ppm
Methoxychlor 2,4,5-TP (Silvex)	<u> </u>			<u> </u>	to to	ppm ppm		ppm ppm
Toxaphene	<u> </u>	-	 	<u> </u>	to	ppm		ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (pp	m)	Maximum (ppm)
67-64-1	Acetone	10000	to	50000
141-78-6	Ethyl acetate	100000	to	300000
7732-18-5	High Explosives (PBX, DAAF, TATB) Water	500000	to to	100 800000
108-88-3	Toluene	1	to	10
108-10-1	Methyl isobutyl ketone	1	to	10
	Isopropyl Alcohol	11_	to	10
	Total of max. ranges of this section and page 2			115.01 in %
	Additional Information			
	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pr	ovid	e it below
This waste is non-ex	plosive, therefore non-reactive, non D003.			
Section 6 - Work Cor	ntrol Documentation			
Do the procedures for	or this process cover how to manage this waste? Yes No (provide co.	mments)		
Do the procedures for	or this process address controls to prevent changes to waste constituents and concentration	ns or addition or	rem	noval of
waste to/from contail				
Comments:				
Section 7 - Packagin	g and Storage Control			
Describe how the wa	ste will be packaged in according to the applicable WAC.			
DOT Compliant Cont				
·				
Identify the storage n	nanagement controls that will be used for this waste stream: (check all that apply)			
	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Oth	er (describe)		
·	rtification Statements	()		
	meet WAC attachment for: HAZ			
	ds exception/exemption for treatment, storage, or disposal.			
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Pr	incinle Associat	≏ Dir	rector for
	s [PADWP] for assistance.)	iricipie Associat	CDII	COLOT TO
	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certification:	y that the waste	cha	racterization
	m is correct and that it meets the requirements of the applicable waste acceptance criteria.			
be made available to imprisonment for know	regulatory agencies and that there are significant penalties for submitting false information,	including the po	ossik	oility of fines and
Signature: <u>ERNES</u>	<u>THARTLINE (188218)</u> Date: <u>10/20/15 03:25 Plane</u>	M		
Wasto Management	Approval: I have reviewed this form and any associated attachments and the characteriza	tion information	nrov	vided appears to
	rate. I certify, to the best of my knowledge, that the waste characterization information pro			
the requirements of the	, , , , , , , , , , , , , , , , , , , ,		(,
Signature: JEFFRE	Y LEE (217511) Date: 10/21/15 06:48 A	M		
orginature. JEFFRE	TELE (217011) Date. 10/21/13 00.46 Al	VI		_
RCRA Review: I have	e reviewed this form and any associated attachments and the characterization information	provided appear	rs to	be complete and
accurate. I certify, to	the best of my knowledge, that the waste characterization information provided by the was			
the applicable WAC.				
Signature: ANDY E	LICIO (118692) Date: 10/27/15 07:20 A	М		
		<u> </u>		

Attachment 4 - I DR and UHC

Attachment 4 - LDR and ORC							
Identify category and present	ce of any constituents listed below (equal to or above lim	it).					
Non-Wastewater/Wastewate	er Category (check only one)						
☑ Non Wastewater	☐ Wastewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1				
lotifications and Certifications - Check the appilcable boxes							
Generator Requirements:							
☐ This shipment contains ha	azardous waste contaminated soil that does not meet tre	atment standards	Sign Certification #2				
☐ This shipment contains ur	(No certification)						
☐ Hazardous wastes (excep	Sign Certification #3						
☐ Hazardous wastes contar	Sign Certification #4						
TSDF or Generator Treatme	ent:						
☐ TSDF treated hazardous	debris meeting the alternative treatment standards of 40) CFR 268.45	Sign Certification #5				
☐ Generator treated hazard	Sign Certification #6						
☐ Hazardous wastes conta	Sign Certification #7						
☐ Wastes or residues from	Sign Certification #8						
☐ Wastes or residues from	Sign Certification #9						
	ting the more stringent 40 CFR 268.40 treatment standa		Sign Certification #10				
☐ Other generator wastes r	meeting the more stringent 40 CFR 268.40 treatment sta	ndards to be land disposed	Sign Certification #11				
	Notification of Underlying Hazardo	ous Constituents					

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

ΔV	lo Underlying Hazardous Constituents in th	is waste sti	ream.		
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
_	Organic Constituents				(mg/kg unless noted otherwise)
	Acenaphthene	83-32-9		3.4	34.0
<u> </u>	Acenaphthylene	208-96-8		3.4	34.0
	Acetone	67-64-1		160.0	1600.0
<u></u>	Acetonitrile	75-05-8		38.0	380.0
	Acetophenone	98-86-2		9.7	97.0
	2-Acetylaminofluorene	53-96-3		140.0	1400.0
	Acrolein	107-02-8		N/A	N/A
	Acrylamide	79-06-1		23.0	230.0
	Acrylonitrile	107-13-1	0.24	84.0	840.0
	Aldicarb sulfone	1646-88-4		0.28	2.8
	Aldrin	309-00-2	0.021	0.066	0.66
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
	Aniline	62-53-3	0.81	14.0	140.0
	o-Anisidine	90-04-0	0.01	0.66	6.6
	Anthracene	120-12-7		3.4	34.0
	Aramite	140-57-8	0.36	N/A	N/A
	alpha-BHC	319-84-6	0.00014	0.066	0.66
	beta-BHC	319-85-7	0.00014	0.066	0.66
	delta-BHC	319-86-8	0.023	0.066	0.66
	Barban	101-27-9	0.056	1.4	14.0
	Bendiocarb	22781-23-3	0.056	1.4	14.0
	Benomyl	17804-35-2	0.056	1.4	14.0
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
	Benzal chloride	98-87-3	0.055	6.0	60.0
	Benzene	71-43-2	0.14	10.0	100.0
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
	Bromodichloromethane	75-27-4	0.35	15.0	150.0
	Bromomethane	74-83-9	0.11	15.0	150.0
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0
	Butylate	2008-41-5	0.042	1.4	14.0
	Carbaryl	63-25-2		0.14	1.4

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
_	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-71-8		6.0	60.0
=	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
ö	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
_	2,4-Dichlorophenol	87-65-0		14.0	140.0
_	·				
	1,2-Dichloropropane	78-87-5		18.0	180.0
<u>-</u>	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
_	Dieldrin Dietholote	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3	0.047	28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8	0.023	0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
Endrin	72-20-8	0.0028	0.13	1.3
Endrin aldehyde	7421-93-4	0.025	0.13	1.3
Ethyl acetate	141-78-6	0.34	33.0	330.0
Ethyl benzene	100-41-4	0.057	10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
Ethylene oxide	75-21-8		N/A	N/A
Famphur	52-85-7		15.0	150.0
Fluoranthene	206-44-0		3.4	34.0
Fluorene	86-73-7	0.059	3.4	34.0
Fluoride	16984-48-8	35.0	N/A	N/A
Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
Hexachlorobenzene	118-74-1	0.055	10.0	100.0
Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1		0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
lodomethane	74-88-4	0.19	65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6	0.021	0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0	0.0011	0.13	1.3
Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7		84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7		1.4	14.0
Methomyl	16752-77-5		0.14	1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1		33.0	330.0
Methyl methacrylate	80-62-6		160.0	1600.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3		5.6	56.0
	2-Naphthylamine	91-59-8		N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6		28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
<u> </u>	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0		0.28	2.8
_	Parathion	56-38-2		4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
_	Pentachlorobenzene	608-93-5		10.0	100.0
	Pentachloroethane Pentachloronitrobenzene	76-01-7		6.0	60.0
	Pentachlorophenol	82-68-8 87-86-5		4.8	48.0
-	Phenacetin	62-44-2		16.0	74.0 160.0
	Phenanthrene	85-01-8		5.6	
	Phenol	108-95-2		6.2	56.0 62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5		N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0		28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7		1.4	14.0
	Promecarb	2631-37-0		1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8	14.0	N/A	N/A
	2,4,5-T	93-76-5	0.72	7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5	0.000063	0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3	0.000063	0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
	13.46 (WCATS PA)		into d 2/0/2021 10.		Daga 7 of C

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

46444 APPROVED

Waste Characteriza	ation Information
Waste Stream ID:	46444
WPF ID (Legacy):	
Waste Stream Name:	WATER AND VACUUM PUMP OIL VEHICLE FROM CRYSTAL GROWTH & PROCESSING
Expiration Date:	06/04/2021
Waste Type:	Solid Waste - Other
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Non-hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	
EPA Codes:	
Waste Acceptance:	
EPA Form Code:	<u>NA</u>
	Not Applicable: Not Applicable
EPA Source Code:	<u>NA</u>
	Not Applicable: Not Applicable

Waste Generation Estimates

YEAR	VOLUME
2021	0.25 CM
2020	0.25 CM
2019	0.25 CM



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
46444	

Generator's Z Number	Waste Generator's Name (pr	, I		WMC's Name (p	*	Generator's Phone
107408	ARMENTA, CLAUDINE	32	4836	BRINER,	PATRICK	5056657358
Generator's Mail Stop	Waste Generating Group	Waste Stream Ted	chnical Area	Building	Room	WMC Phone
C929	M-9	40		000012		5056651354
Waste Accumulation (che	ck only one)					
						ite No:
☐ Satellite Accumulation A	Area Site No:	<u> </u>		☐ NM Special V	Vaste S	ite No:
☐ Less-than-90 Days Store ☐ TSDF	age Area Site No	<u> </u>		☑ None of the A	bove S	ite No:
☐ Universal Waste Storage	o Aroa Site No:			☐ PCBs Storage ☐ Rad Staging	Area S	ite No: ite No:
☐ Used Oil for Recycle	Site No			☐ Rad Storage		ite No:
ER Use Only		·				
☐ ER Site	SWMU/AOC No	1				
	on (check as many as apply)	·				
			l Ni sur	10011 0510		
☐ Chemical/Physical Anal	ysis ☑ Attac □ Attac	_	ample No: ev '	10641 па 3543		
☐ Radiological Analysis☐ PCB Analysis	□ Attac	_	ample No: ample No:			
✓ Acceptable Knowledge	-	_		-IWD-TA40-2248		
✓ Material Safety Data Sh				2, silicone carbide		
	,					
	on/Minimization (answer all		_	11/		7 N.
	limination, or material substitu			Yes (provide com		Í No
<u> </u>	the waste stream be recycle] Yes (<i>provide con</i>	/	Î No
	en incorporated into procedu	res or other process		Yes		No (provide comments)
Can this waste be generate	ed outside a RCA?		L	Yes (provide con	nments) L] No
Comments:						
Section 2 - Chemical and F	Physical Information					
		eck all that apply)	Waste Soul	rce (check only on	e) Waste	• Matrix (check only one)
Waste Type (check only or	me) Waste Category (che	eck all that apply)	Waste Soul		(e) Waste	• Matrix (check only one)
	me) Waste Category (che	eck all that apply)			Gas	• Matrix (check only one) 5 Atmospheres Pressure
Waste Type (check only or ☐ Unused/Unspent Chemic	me) Waste Category (checal Inorganic Inorgani	uctions)	Waste Soul ☐ Decon ☐ Material	rce A s Processing/Prod	Gas	
Waste Type (check only or ☐ Unused/Unspent Chemi ☑ Process Waste/Spent Chemical/Other	me) Waste Category (checal ☐ Inorganic ☐ Organic ☐ Solvent (see instruction ☐ Degreaser (see instructi	uctions)	Waste Sour ☐ Decon ☐ Material ☐ Researc	rce A s Processing/Prod ch/Development/Te	Gas □ ≤1. uction □ >1.	5 Atmospheres Pressure
Waste Type (check only or	me) Waste Category (che cal ☐ Inorganic ☐ Organic ☐ Solvent (see instr ☐ Degreaser (see in ☐ Dioxin	uctions)	Waste Soul ☐ Decon ☐ Material ☐ Researc ☐ Schedul	rce A s Processing/Prod ch/Development/Te ed Maintenance	Gas □ ≤1. □ uction □ >1. □ sting □ Liq	5 Atmospheres Pressure 5 Atmospheres Pressure uified Compressed Gas
Waste Type (check only or ☐ Unused/Unspent Chemic ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a	me) Waste Category (check cal	uctions) structions)	Waste Sour ☐ Decon ☐ Material ☐ Researc ☐ Schedul ☐ Houseke	rce A s Processing/Prod ch/Development/Te ed Maintenance eeping - Routine	Gas □ ≤1. □ sting □ Liq Liquic	5 Atmospheres Pressure 5 Atmospheres Pressure uified Compressed Gas
Waste Type (check only or ☐ Unused/Unspent Chemic ☑ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No	me) Waste Category (check cal	uctions) structions) is Waste or Residue	Waste Sour ☐ Decon ☐ Material ☐ Researd ☐ Schedul ☐ Houseke	rce A s Processing/Prod ch/Development/Te ed Maintenance eeping - Routine canup - Routine	Gas □ ≤1. □ valuation □ >1. □ tiquic □ Aq	5 Atmospheres Pressure 5 Atmospheres Pressure uified Compressed Gas 1 ueous
Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive	Maste Category (che de la	uctions) structions) is Waste or Residue ned-In	Waste Sour □ Decon □ Material □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin	s Processing/Prod ch/Development/Te ed Maintenance eeping - Routine canup - Routine g - Routine Monito	Gas □ ≤1. □ Liq □ Liq □ Liquic □ Aq □ No	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas 1 ueous n-Aqueous
Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive ☐ Radioactive - Low Level	me) Waste Category (che cal ☐ Inorganic ☐ Organic ☐ Solvent (see instr ☐ Degreaser (see in ☐ Dioxin ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medica	uctions) structions) is Waste or Residuo ned-In	Waste Sour ☐ Decon ☐ Material ☐ Researd ☐ Schedul ☐ Houseke	s Processing/Prod ch/Development/Te ed Maintenance eeping - Routine canup - Routine g - Routine Monito	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas 1 ueous n-Aqueous spended Solids/Aqueous
Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive	me) Waste Category (che cal ☐ Inorganic ☐ Organic ☐ Solvent (see instr ☐ Degreaser (see in ☐ Dioxin ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medica	uctions) structions) is Waste or Residuo ned-In	Waste Sour □ Decon □ Material □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin	s Processing/Prod ch/Development/Te ed Maintenance eeping - Routine canup - Routine g - Routine Monito	Gas <1. uction	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas 1 ueous n-Aqueous
Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive ☐ Radioactive - Low Level ☐ Radioactive - Transuran	me) Waste Category (che cal ☑ Inorganic ☑ Organic □ Solvent (see instr □ Dioxin RCA? □ Electroplating □ Treated Hazardou □ No-Longer Contai ☑ Explosive Process □ Infectious/Medicai □ Biological □ Beryllium	uctions) structions) is Waste or Residu ned-In s	Waste Sour □ Decon □ Material □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine eanup - Routine g - Routine Monitolescribe)	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas 1 ueous n-Aqueous spended Solids/Aqueous spended Solids/Non-
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Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive ☐ Radioactive - Low Level ☐ Radioactive - Transuran Waste Destination (check ☐ SWWS ☐ RLWTF ☐ RLWTP	me) Waste Category (che cal ☐ Inorganic ☐ Organic ☐ Solvent (see instr ☐ Degreaser (see in ☐ Dioxin RCA? ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medicai ☐ Biological ☐ Beryllium ☐ Empty Container ☐ Battery (see instru Asbestos ☐ Friable	uctions) structions) us Waste or Residue ned-In s I	Waste Sour □ Decon □ Material □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour □ Abateme □ Construe □ Demoliti □ Decon/□	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine ranup - Routine g - Routine Monitolescribe) rce Beent ction/Upgrades on Decom	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas i ueous n-Aqueous spended Solids/Aqueous spended Solids/Non- ueous wder/Ash/Dust lid
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Waste Type (check only or ☐ Unused/Unspent Chemic ☐ Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a ☐ Yes ☑ No ☑ Non-radioactive ☐ Radioactive - Low Level ☐ Radioactive - Transuran Waste Destination (check ☐ SWWS ☐ RLWTF ☐ RLWTP ☐ TA-16/HE ☐ NTS	me) Waste Category (che cal ☐ Inorganic ☐ Organic ☐ Solvent (see instr ☐ Degreaser (see in ☐ Dioxin RCA? ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medica ☐ Biological ☐ Beryllium ☐ Empty Container ☐ Battery (see instru Asbestos ☐ Friable ☐ Non-Friable ☐ Non-Friable ☐ Conce	uctions) structions) us Waste or Residue ned-In s (see instructions) uctions)	Waste Sour □ Decon □ Material □ Researd □ Schedul □ Houseke □ Spill Cle □ Samplin □ Other (d Waste Sour □ Abatem □ Construe □ Decon/□ □ Investiga □ Orphan/ □ Remedia □ Repacki	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine eanup - Routine g - Routine Monitolescribe) rce B ent ection/Upgrades on Decom ative Derived Legacy ation/Restoration ng (secondary)	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas i ueous n-Aqueous spended Solids/Aqueous spended Solids/Non- ueous wder/Ash/Dust lid udge sorbed/Solidified Liquid bris
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Waste Type (check only or Unused/Unspent Chemick Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a Yes	me) Waste Category (check cal ☐ Inorganic ☐ Organic ☐ Solvent (see instruction ☐ Degreaser (see in ☐ Dioxin ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medicai ☐ Biological ☐ Beryllium ☐ Empty Container ☐ Battery (see instruction ☐ Non-Friable ☐ Non-Friable ☐ PCB Source Concei ☐ PCB < 50 ppm ☐ PCB >= 50 - < 50 ☐ PCB >= 500 ppm ☐ Hazardous Wastei ☐ Untreated Hazardous	uctions) istructions) is Waste or Residue ned-In is (see instructions) ictions) ntration 0 ppm • Contaminated Soil ous Debris	Waste Sour Decon Material Researc Schedul Houseke Spill Cle Samplin Other (d Waste Sour Abateme Construe Decon/C Investig Orphan/ Remedia Repacki Houseke	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine sanup - Routine g - Routine Monitorescribe) rce B ent ection/Upgrades on Decompative Derived Legacy ation/Restoration ing (secondary) duled Maintenance eeping (non-routine	Gas \(\leq \leq \) \(\leq	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure 6.5 Atmospheres Pressure 6.6 Atmospheres Pressure 6.7 Atmospheres Pressure 6.8 Useous 6.9 Useous 6.0 Atmospheres Pressure
Waste Type (check only or Unused/Unspent Chemick Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a Yes	waste Category (check cal □ Inorganic □ Organic □ Degreaser (see instruction of the color of the category) □ Degreaser (see in organic □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Freated Hazardou □ No-Longer Container □ Explosive Process □ Infectious/Medicai □ Biological □ Beryllium □ Empty Container □ Battery (see instruction organical) □ Non-Friable □ Non-Friable □ PCB < 50 ppm □ PCB >= 50 - < 50 □ PCB >= 500 ppm □ Hazardous Waste □ Untreated Hazard □ Commercial Solid	uctions) istructions) is Waste or Residue ned-In is (see instructions) ictions) ntration 0 ppm • Contaminated Soil ous Debris	Waste Sour Decon Material Researc Schedul Houseke Spill Cle Samplin Other (d Waste Sour Abateme Construe Decon/C Investign Remedia Repacki Houseke Spill Cle	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine sanup - Routine g - Routine Monitorescribe) rce B ent ction/Upgrades on Decomerative Derived Legacy attion/Restoration ng (secondary) duled Maintenance	Gas \(\leq \leq \) \(\leq	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure 6.5 Atmospheres Pressure 6.6 Atmospheres Pressure 6.7 Atmospheres Pressure 6.8 Useous 6.9 Useous 6.0 Atmospheres Pressure
Waste Type (check only or Unused/Unspent Chemick Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a Yes	me) Waste Category (check cal ☐ Inorganic ☐ Organic ☐ Solvent (see instruction ☐ Degreaser (see in ☐ Dioxin ☐ Electroplating ☐ Treated Hazardou ☐ No-Longer Contai ☐ Explosive Process ☐ Infectious/Medicai ☐ Biological ☐ Beryllium ☐ Empty Container ☐ Battery (see instruction ☐ Non-Friable ☐ Non-Friable ☐ PCB Source Concei ☐ PCB < 50 ppm ☐ PCB >= 50 - < 50 ☐ PCB >= 500 ppm ☐ Hazardous Wastei ☐ Untreated Hazardous	uctions) istructions) is Waste or Residue ned-In is (see instructions) ictions) ntration 0 ppm • Contaminated Soil ous Debris	Waste Sour Decon Material Researc Schedul Houseke Spill Cle Samplin Other (d Waste Sour Abateme Construe Decon/C Investign Remedia Repacki Houseke Spill Cle	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine sanup - Routine g - Routine Monitorescribe) rce B ent ction/Upgrades on Decome ative Derived Legacy ation/Restoration ing (secondary) duled Maintenance eeping (non-routine troleum Tanks	Gas \(\leq \leq \) \(\leq	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure 6.5 Atmospheres Pressure 6.6 Atmospheres Pressure 6.7 Atmospheres Pressure 6.8 Useous 6.9 Useous 6.0 Atmospheres Pressure
Waste Type (check only or Unused/Unspent Chemick Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a Yes	waste Category (check cal □ Inorganic □ Organic □ Degreaser (see instruction of the color of the category) □ Degreaser (see in organic □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Freated Hazardou □ No-Longer Container □ Explosive Process □ Infectious/Medicai □ Biological □ Beryllium □ Empty Container □ Battery (see instruction organical) □ Non-Friable □ Non-Friable □ PCB < 50 ppm □ PCB >= 50 - < 50 □ PCB >= 500 ppm □ Hazardous Waste □ Untreated Hazard □ Commercial Solid	uctions) istructions) is Waste or Residue ned-In is (see instructions) ictions) ntration 0 ppm • Contaminated Soil ous Debris	Waste Sour Decon Material Researc Schedul Houseke Spill Cle Samplin Other (d Waste Sour Abateme Construe Decon/E Investiga Orphan/ Remedia Repacki Houseke Spill Cle	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine ranup - Routine g - Routine Monitorescribe) rce B ent ction/Upgrades on Decome ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine troleum Tanks m Tanks	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure 6.5 Atmospheres Pressure 6.6 Atmospheres Pressure 6.7 Atmospheres Pressure 6.8 Useous 6.9 Useous 6.0 Atmospheres Pressure
Waste Type (check only or Unused/Unspent Chemick Process Waste/Spent Chemical/Other Radiological Information Was Waste generated in a Yes	waste Category (check cal □ Inorganic □ Organic □ Degreaser (see instruction of the color of the category) □ Degreaser (see in organic □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Degreaser (see in organic □ Dioxin □ Freated Hazardou □ No-Longer Container □ Explosive Process □ Infectious/Medicai □ Biological □ Beryllium □ Empty Container □ Battery (see instruction organical) □ Non-Friable □ Non-Friable □ PCB < 50 ppm □ PCB >= 50 - < 50 □ PCB >= 500 ppm □ Hazardous Waste □ Untreated Hazard □ Commercial Solid	uctions) istructions) is Waste or Residue ned-In is (see instructions) ictions) ntration 0 ppm • Contaminated Soil ous Debris	Waste Sour Decon Material Researc Schedul Houseke Spill Cle Samplin Other (d Waste Sour Abateme Construe Decon/D Investing Orphan/ Remedia Repacki Unschee Spill Cle	s Processing/Prodeh/Development/Teed Maintenance eeping - Routine ranup - Routine g - Routine Monitorescribe) rce B ent ction/Upgrades on Decome ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eeping (non-routine troleum Tanks m Tanks	Gas	5.5 Atmospheres Pressure 5.5 Atmospheres Pressure uified Compressed Gas ueous n-Aqueous spended Solids/Aqueous spended Solids/Non- ueous wder/Ash/Dust lid udge sorbed/Solidified Liquid bris x Type (check only one) mogeneous terogeneous

Section 3 - Process and Waste Des	cription								
Process Description: HE crystal growth and processing operations at TA-40-12 lab.									
Waste Description: VACUUM PUMP OIL, WATER, KERG SILICONE CARBIDE, GLYCERINE, HMX, PETN, RDX, NTO AND TATB ENERGETIC MATERIAL LIST. [SEE	AND HE PRESEN	FROM C IT IN NON	RYSTAL	GROWING	& PROCESSING OPER	RATIONS. HE IN	NCLUDE	ES TRACE AMO	
Section 4 - Characteristics									
Ignitability (check only one)	Corrosi	vity (che	ck only or	ne) (nH)	Reactivity (check as m	any as anniy) R	oilina P	Point (check only	(one)
☐ < 73 F (< 22.8 C) ☐ 73 - 99 F (22.8 - 37.2 C) ☐ 100 - 139 F (37.8 - 59.4 C) ☐ 140 - 200 F (60.0 - 99.3 C) ☐ > 200 (> 99.3 C) ☐ EPA Ignitable - Non-liquid ☐ DOT Flammable Gas ☐ DOT Oxidizer	□ <= 2.0 □ 2.1 - 4.0 □ 4.1 - 6.0 ☑ 6.1 - 9.0 □ 9.1 - 12.4 □ >= 12.5 □ Liquid Corrosive to Steel				□ RCRA Unstable □ Water Reactive □ Cyanide Bearing □ Sulfide Bearing □ Pyrophoric □ Shock Sensitive □ Explosive [Specify □ Won-Reactive	Boiling Point (check only one) □ <= 95 F (<= 35 C) □ >95 F (> 35 C) □ Not Applicable			
☑ Not Ignitable	L NOII-	aqueous			in Non-Neactive				
		haracteria	zation Met	hod	Concentration	of Contaminants		<u> </u>	
		ilai actei iz	ation wet	None or		nt present at			
Identify for all contaminants listed	AK	TCLP	Total	Non-detect		Maxiumum		Regulatory	Limit
Toxicity Characteristic Metals						pm = 1%)			
Arsenic		<u> </u>			0.001 to	0.00688 pp			ppm
Barium Cadmium		<u> </u>			0.01 to 0.00001 to	0.0763 pp 0.000467 pp		100.0	ppm
Chromium		<u> </u>			0.00001 to	0.000407 pp 0.74 pp			ppm
Lead		V			0.01 to	0.0115 pp			ppm
Mercury		<u> </u>		<u> </u>	to	рр			ppm
Selenium		Ø		V	to	pp			ppm
Silver		Ø		V	to	рр	m	5.0	ppm
Toxicity Characteristic Organics									
Benzene				☑	to	рр			ppm
Carbon tetrachloride				<u> </u>	to to	pp			ppm
Chlorobenzene Chloroform		<u> </u>	┝╫┈	<u> </u>	to	pp pp		100.0	ppm
Cresol		Ø		V	to	pp		200.0	
p-Cresol		$\overline{\square}$		<u> </u>	to	pp		200.0	
m-Cresol		Ø		V	to	pp		200.0	
o-Cresol		Ø		V	to	рр		200.0	
1,4-Dichlorobenzene				☑	to	рр			ppm
1,2-Dichloroethane		Ø		Ø	to	pp			ppm
1,1-Dichloroethylene			⊢	☑	to to	pp			ppm
2,4-Dinitrotoluene Hexachlorobenzene				<u> </u>	to	pp pp		0.13 0.13	
Hexachlorobutadiene		<u> </u>		Ø	to	pp			ppm
Hexachloroethane		<u> </u>		Ø	to	pp			ppm
Methyl ethyl ketone		Ø		V	to	pp		200.0	
Nitrobenzene		Ø			to	рр	m		ppm
Pentachlorophenol		☑		✓	to	рр		100.0	
Pyridine	<u> </u>	Ø		☑	to	рр			ppm
Tetrachloroethylene		<u> </u>		Ø	to	pp			ppm
Trichloroethylene 2,4,6-Trichlorophenol				<u> </u>	to to	pp pp			ppm ppm
2,4,5-Trichlorophenol		<u> </u>		<u> </u>	to	pp		400.0	
Vinyl chloride		<u> </u>	 	<u> </u>	to	pp			ppm
Herbicides and Pesticides		<u> </u>	. –			<u>PP</u>	-	, 0.2	1 5
Chlordane	$\overline{\mathbf{A}}$			V	to	рр	m_	0.03	ppm
2,4-D	V			Ø	to	рр	m	10.0	
Endrin	<u> </u>		<u> </u>	☑	to	pp		0.02	
Heptachlor (& its epoxide)	Ø		무	Ø	to	pp		0.008	
<u>Lindane (gamma-BHC)</u> Methoxychlor	<u> </u>			<u> </u>	to to	pp pp		10.0	ppm
2,4,5-TP (Silvex)	<u> </u>		┝旹	<u> </u>	to	pp			ppm
Toxaphene	<u> </u>				to	pp			ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppi	m)	Maximum (ppm)
	ACETAMINOPHEN	10000	to	50000
	SILICONE CARBIDE	1	to	10000
	allowed LANL energetic material list	1	to	10000
	glycerine	10	to	10000
	WATER	950000	to	980000
	DIMETHYL SULFOXIDE	1	to	10000
	KEROSENE	1	to	10000
	ALUMINUM OXIDE	10000	to	50000
7440-36-0	Antimony	0.0001	to	0.004
7429-90-5	Aluminum	0	to	30
2691-41-0	HMX	0.0001	to	1.5
7440-02-0	Nickel	0.0001	to	0.6
014797-73-0	Perchlorate	0.0001	to	0.0002
108-95-2	Phenol	0.0001	to	0.008
7440-09-7	Potassium	0.0001	to	2.5
121-82-4	RDX	0.0001	to	0.0004
7440-23-5	Sodium	0	to	460
7440-24-6	Strontium	0.0001	to	0.06
	TATB	0.0001	to	0.02
7440-31-5	Tin	0.0001	to	0.02
7440-61-1	Uranium	0.0001	to	0.0005
7440-62-2	Vanadium	0.0001	to	0.03
7440-66-6	Zinc	0.0001	to	0.3
7440-42-8	Boron	0.0001	to	0.07
7440-70-2	Calcium	0.0001	to	0.009
7440-48-4	Cobalt	0.0001	to	0.03
7439-89-6	Iron	0.1	to	10
7439-95-4	Magnesium	0.0001	to	0.003
7439-96-5	Manganese	0.1	to	0.3
7439-98-7	Molybdenum	0.001	to	0.04
7400 00 7	Vacuum Pump Oil	10000	to	50000
7440-50-8	Copper	0.01	to	0.2
	Total of max. ranges of this section and page 2	0.01		118.05 in %
	Additional Information			1 10.03 111 70
f additional information		on this form or	ovida	it holow
	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pr	ovide	it below
Waste is compatible	with itself and any DOT-compliant containers it is accumulated and stored in.			
	" (BODA DOOD " BOTH DO 4 1			
•	ve, therefore non-RCRA-D003 reactive and non-DOT Hazard Class 1 explosive.			
ection 6 - Work Cor	trol Documentation			
Do the procedures for	or this process cover how to manage this waste?	mments)		
Do the procedures for	or this process address controls to prevent changes to waste constituents and concentration	ns or addition or	rem	oval of
waste to/from contain				
Comments:				
ection 7 - Packagin	g and Storage Control			
	ste will be packaged in according to the applicable WAC.			
	with itself and any DOT-compliant containers it is accumulated and stored in.			
. rabio io compandie	man needs and any De to compliant containers it is accumulated and stored iii.			
Identify the storage =	panagement controls that will be used for this waste stream; (sheek all that apply)			
-	nanagement controls that will be used for this waste stream: (check all that apply)	-		
□ I amper Indication	Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☐ Oth	er (describe)		

Section 8 - Waste Certification Statements ☑ Waste appears to meet WAC attachment for: SW-OTHER Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: CLAUDINE ARMENTA (107408) Date: 06/05/19 07:26 AM Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Date: Signature: JOHN PIENIAZEK (106155) 06/05/19 07:46 AM RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and

RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: ANDY ELICIO (118692) Date: 06/05/19 08:09 AM

Attachment 4 - LDR and UHC

		Alli	achment 4 - LDR	and unc								
	tify category and presence of any constituents		(equal to or abov	e limit).								
	-Wastewater/Wastewater Category (check of		OED 000 0(6)	T b. D b. (40, OFD, 000, 6	2/6)]							
Noti	Non Wastewater			☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1							
		ilicable box	63									
	erator Requirements:	minated soil	that does not mo	at treatment standards	Sign Certification #2							
☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards ☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards ☐ (No certification)												
	☐ Hazardous wastes (except soil) meeting treatment standards at point of generation Sign Certification #3											
_	Hazardous wastes contaminated soil meeting treatment standards at point of generation Sign Certification #4											
TSD	TSDF or Generator Treatment:											
	☐ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 Sign Certification #5											
	☐ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 Sign Certification #6											
	☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 Sign Certification #7											
	Wastes or residues from characteristic hazard				Sign Certification #8							
	Wastes or residues from characteristic hazard Other TSDF wastes meeting the more stringer			S .	Sign Certification #9 Sign Certification #10							
	Other generator wastes meeting the more stringer				Sign Certification #10							
				ardous Constituents	orgin continuation #11							
	(Check the applicable underlying cons				aracterstic wastes only)							
ا □ ا	lo Underlying Hazardous Constituents in th	nis waste stı	ream.									
	, ,		Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS							
	Organic Constituents	CASRN	Standard (mg/L)	(mg/kg unless noted otherwise)	(mg/kg unless noted otherwise)							
	Acenaphthene	83-32-9	0.059	3.4	34.0							
	Acenaphthylene	208-96-8	0.059	3.4	34.0							
	Acetone	67-64-1	0.28	160.0	1600.0							
	Acetonitrile	75-05-8	5.6	38.0	380.0							
	Acetophenone	98-86-2	0.01	9.7	97.0							
	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0							
	Acrolein	107-02-8		N/A	N/A							
	Acrylamide	79-06-1		23.0	230.0							
	Acrylonitrile	107-13-1		84.0	840.0							
	Aldicarb sulfone	1646-88-4		0.28	2.8							
	Aldrin	309-00-2		0.066	0.66							
	4-Aminobiphenyl	92-67-1		N/A	N/A							
	Aniline	62-53-3		14.0	140.0							
	o-Anisidine	90-04-0		0.66	6.6							
	Anthracene	120-12-7		3.4	34.0							
	Aramite	140-57-8		N/A	N/A							
	alpha-BHC	319-84-6		0.066	0.66							
	beta-BHC	319-85-7		0.066	0.66							
	delta-BHC	319-86-8		0.066								
	Barban	101-27-9		1.4	0.66							
	Bendiocarb	22781-23-3		1.4	14.0 14.0							
	Benomyl	17804-35-2		1.4								
-	,				14.0							
	Benz[a]anthracene	56-55-3		3.4	34.0							
	Benzal chloride	98-87-3		6.0	60.0							
	Benzene	71-43-2		10.0	100.0							
	Benzo(b)fluoranthene	205-99-2		6.8	68.0							
	Benzo[a]pyrene	50-32-8		3.4	34.0							
	Benzo[ghi]perylene	191-24-2		1.8	18.0							
	Benzo[k]fluoranthene	207-08-9		6.8	68.0							
	Bis(2-Chloroethoxy)methane	111-91-1		7.2	72.0							
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0							
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0							
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0							
	Bromodichloromethane	75-27-4	0.35	15.0	150.0							
	Bromomethane	74-83-9	0.11	15.0	150.0							
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0							
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0							

□ Butylate

□ Carbaryl

□ Butyl benzyl phthalate

280.0

14.0

1.4

28.0

1.4

0.14

0.017

0.042

0.006

85-68-7

63-25-2

2008-41-5

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
	o-Cresol	95-48-7		5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
_	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
_	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	
ö	Di-n-octyl phthalate	117-84-0		28.0	280.0 280.0
		621-64-7		14.0	
	Di-n-propylnitrosamine Dibenz[a,h]anthracene	53-70-3		8.2	140.0 82.0
				N/A	
	Dibenzo[a,e]pyrene 1,2-Dibromo-3-chloropropane	192-65-4 96-12-8		15.0	N/A 150.0
	1,2-Dibromo-3-cnioropropane	106-93-4		15.0	150.0
	Dibromoethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	150.0
			0.09	6.0	60.0
<u>-</u>	m-Dichlorobenzene	541-73-1			60.0
<u>-</u>	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
<u>-</u>	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
<u>_</u>	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
<u>_</u>	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
<u></u>	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3	0.047	28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8	0.023	0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8	0.0028	0.13	1.3
Endrin aldehyde	7421-93-4	0.025	0.13	1.3
Ethyl acetate	141-78-6	0.34	33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.12	160.0	1600.0
Ethylene oxide	75-21-8	0.12	N/A	N/A
Famphur	52-85-7	0.12	15.0	150.0
Fluoranthene	206-44-0	0.068	3.4	34.0
Fluorene	86-73-7	0.059	3.4	34.0
Fluoride	16984-48-8	35.0	N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor (& its epoxide)	1024-57-3	0.016	0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.000	0.005
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
1,2,3,4,0,7,6-пертастногопретисния 1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	
Hexachlorobenzene			10.0	0.025
Hexachlorobutadiene	118-74-1 87-68-3	0.055 0.055		100.0
Hexachlorocyclopentadiene	77-47-4	0.055	5.6 2.4	56.0
Hexachloroethane			30.0	24.0
	67-72-1	0.055		300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8 55684-94-1	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)		0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
Isobutyl alcohol	74-88-4 78-83-1	0.19 5.6	65.0 170.0	650.0
Isodrin				1700.0
	465-73-6	0.021	0.066	0.66
Isosafrole	120-58-1			26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7	0.056	1.4	14.0
Methomyl	16752-77-5	0.028	0.14	1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
Methyl methacrylate	80-62-6	0.14	160.0	1600.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6		28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5		13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2		1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8		4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8		5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0		28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	
				15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham	122-42-9		1.4	14.0
Proposur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9	0.042	1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72 inted 2/9/2021 10:	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	richloromonofluoromethane (R11) 75-69-4 0.02		30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



CONTAINER PROFILE W824418 CON-HAZ

WS ID: 42360 C ID: 824418 ACTIVE

GENERAL INFORMATION

Container ID: 824418
Labeled ID: W824418

Optional ID:

Chemical Barcode:

Physical State: LIQUID
Waste Stream ID: 42360

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 20-gallon poly

Origin Date: 08-Dec-2015 9:55 am

Accum Start Date: 22-Dec-2015

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: ERNEST HARTLINE (188218)

Insert By: JEFFREY LEE (217511)

Waste Desc: 5 GALLON POLY CARBOY WITH APPROX. 4.8 GALLONS OF SOLVENT WATER MIXTURE FROM PBX

SLURRY PROCESS. WASTE WILL BE PACKAGED IN A 20 GALLON POLY.

WEIGHTS AND VOLUMES

Container Volume: 20.00 gal Gross Weight: 71.00 lb

Waste Volume: 4.80 gal Tare Weight: 10.80 lb

Net Weight: 60.20 lb

LOCATION

Pickup (Origin): LANL: 09: 000037

Current: VEOLIA-CO: OPER: RECV

	COST CODES										
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode				
5K070A	JNEP	EXPL	0000	100.00	INACTIVE	INACTIVE	SELECTION LIST				

		EPA CODES
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D001B	D001	Ignitable: High TOC Ignitable Characteristic Liquids- >= 10% total organic carbon.
F003A	F003	Spent non-halogenated solvents: Acetone
F003D	F003	Spent non-halogenated solvents: Ethyl acetate
F003H	F003	Spent non-halogenated solvents: Methyl isobutyl ketone
F005H	F005	Spent non-halogenated solvents: Toluene



CONTAINER PROFILE W824459 CON-HAZ

WS ID: 42360 C ID: 824459 ACTIVE

GENERAL INFORMATION

Container ID: 824459

Optional ID:

Labeled ID:

Chemical Barcode:

Physical State: LIQUID
Waste Stream ID: 42360

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 20-gallon poly

Origin Date: 08-Dec-2015 9:55 am

Accum Start Date: 22-Dec-2015

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: ERNEST HARTLINE (188218)

W824459

Insert By: JEFFREY LEE (217511)

Waste Desc: 5 GALLON POLY CARBOY WITH APPROX. 4 GALLONS OF SOLVENT WATER MIXTURE FROM PBX

SLURRY PROCESS. WASTE WILL BE PACKAGED IN A 20 GALLON POLY.

WEIGHTS AND VOLUMES

Container Volume: 20.00 gal **Gross Weight**: 62.00 lb

Waste Volume: 4.00 gal Tare Weight: 10.80 lb

Net Weight: 51.20 lb

LOCATION

Pickup (Origin): LANL: 09: 000037

Current: VEOLIA-CO: OPER: RECV

	COST CODES										
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode				
5K070A	JNEP	EXPL	0000	100.00	INACTIVE	INACTIVE	SELECTION LIST				

		EPA CODES
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory
D001B	D001	Ignitable: High TOC Ignitable Characteristic Liquids- >= 10% total organic carbon.
F003A	F003	Spent non-halogenated solvents: Acetone
F003D	F003	Spent non-halogenated solvents: Ethyl acetate
F003H	F003	Spent non-halogenated solvents: Methyl isobutyl ketone
F005H	F005	Spent non-halogenated solvents: Toluene



CONTAINER PROFILE W847940 CON-SW-OTHER

WS ID: 46444 C ID: 847940 Opt ID: PO 525WR002 ACTIVE

GENERAL INFORMATION

 Container ID:
 847940

 Labeled ID:
 W847940

Optional ID: PO 525WR002

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 46444

Work Path: CON-SW-OTHER

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: NO

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 14-gallon poly

Origin Date: 06-Dec-2018 3:53 pm

Accum Start Date:

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: JOHN PIENIAZEK (106155)
Insert By: JOHN PIENIAZEK (106155)

Waste Desc: WATER & VEHICLE WASTE FROM CRYSTAL GROWTH & PROCESSING

WEIGHTS AND VOLUMES

Container Volume: 14.00 gal

Gross Weight: 70.00 lb

Waste Volume: 8.00 gal Tare Weight:

8.00 lb

Net Weight:

62.00 lb

LOCATION

Pickup (Origin): LANL: 40: 000012

Current: LANL: 36: 000048

	COST CODES										
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode				
5K070A	JWB2	6418	0101	100.00	INACTIVE	ACTIVE	SELECTION LIST				

DOT SHIPPING DESC

Status/

Manifest IDs DOT Shipping Description

ACTIVE NON-REGULATED WASTE (WATER WITH TRACE HE)

	TASK HISTORY									
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject							
12/07/2018 11:30 AM	1879349 CANCELLED	LANL:40 - WDR-NRAD	NO							
01/24/2019 3:15 PM	1881743 EXECUTED	LANL:40 » 36:000048	NO							



CONTAINER PROFILE W847943 CON-SW-OTHER

Status:

WS ID: 46444 C ID: 847943 ACTIVE

ACTIVE

NO

GENERAL INFORMATION

Container ID: 847943 **Labeled ID:** W847943

Optional ID:

Chemical Barcode: Decommissioned:

Physical State: LIQUID Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Waste Stream ID: 46444 Container Subtype: 14-gallon poly

Work Path: CON-SW-OTHER Origin Date: 07-Dec-2018 11:24 am

Quantity (Univ): 1 Accum Start Date:

Compactible: NO Closed Date:

Discard Matrix:

TID(s):

Gen Contact: JOHN PIENIAZEK (106155)
Insert By: JOHN PIENIAZEK (106155)

Waste Desc: WATER & VEHICLE WASTE FROM CRYSTAL GROWTH & PROCESSING

WEIGHTS AND VOLUMES

Container Volume: 15.00 gal Gross Weight: 31.10 lb

Waste Volume: 4.00 gal Tare Weight: 9.00 lb

Net Weight: 22.10 lb

LOCATION

Pickup (Origin): LANL: 40: 000011

Current: LANL: 36: 000048

	COST CODES										
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode				
5K070A	JWB2	6418	0101	100.00	INACTIVE	ACTIVE	SELECTION LIST				

DOT SHIPPING DESC

Status/

Manifest IDs DOT Shipping Description

ACTIVE NON-REGULATED WASTE (WATER WITH TRACE HE)

		TASK HISTORY	
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject
12/07/2018 11:30 AM	1879349 CANCELLED	LANL:40 - WDR-NRAD	NO
01/24/2019 3:15 PM	1881743 EXECUTED	LANL:40 » 36:000048	NO



CONTAINER PROFILE W850988 CON-SW-OTHER

Status:

WS ID: 46444 C ID: 850988 Opt ID: PO525WR007 ACTIVE

DF: Fiberboard or plastic drums, barrels, kegs

ACTIVE

14-gallon poly

05-Jun-2019 8:16 am

NO

GENERAL INFORMATION

Decommissioned:

Container Subtype:

Accum Start Date:

Container Type:

Origin Date:

Closed Date:

 Container ID:
 850988

 Labeled ID:
 W850988

Optional ID: PO525WR007

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 46444

Work Path: CON-SW-OTHER

Quantity (Univ): 1

Compactible: NO

Discard Matrix:

TID(s):

Gen Contact: JOHN PIENIAZEK (106155)
Insert By: JOHN PIENIAZEK (106155)

Waste Desc: WATER AND VACUUM PUMP OIL VEHICLE FROM CRYSTAL GROWTH & PROCESSING

WEIGHTS AND VOLUMES

Container Volume: 14.00 gal Gross Weight: 129.30 lb

Waste Volume: 14.00 gal Tare Weight: 8.00 lb

Net Weight: 121.30 lb

LOCATION

Pickup (Origin): LANL: 40: 000012

Current: LANL: 60: 000017

TAGS

Insert By /
Container Tag List Value Date Explanation Date & TIme

FREE LIQUIDS 06/05/2019 JOHN PIENIAZEK (106155) 06/05/2019 8:50 AM

COST CODES Cost Code Cost Prog Cost Work Percent Cost Center Code **Allocation Recharge Mode** Center Account **Package Status Status INACTIVE** SELECTION LIST 5K070A JWB2 6418 0101 100.00 **ACTIVE**



CONTAINER PROFILE W855901 CON-SW-OTHER

WS ID: 46444 C ID: 855901 ACTIVE

GENERAL INFORMATION

Container ID: 855901 **Labeled ID:** W855901

Optional ID:

Chemical Barcode:

Physical State: LIQUID

Waste Stream ID: 46444

Work Path: CON-SW-OTHER

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: NO

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 14-gallon poly

Origin Date: 21-Feb-2020 9:17 am

Accum Start Date:

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: CLAUDINE ARMENTA (107408)

Insert By: PATRICK BRINER (324836)

Waste Desc: WATER AND VACUUM PUMP OIL VEHICLE FROM CRYSTAL GROWTH & PROCESSING

WEIGHTS AND VOLUMES

Container Volume: 14.00 gal Gross Weight: 110.00 lb

Waste Volume: 14.00 gal Tare Weight: 9.50 lb

Net Weight: 100.50 lb

LOCATION

Pickup (Origin): LANL: 40: 000012

Current: LANL: 36: 000048

COST CODES							
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
5K070A	JWB2	6418	0101	100.00	INACTIVE	ACTIVE	SELECTION LIST

DOT SHIPPING DESC

Status/

Manifest IDs DOT Shipping Description

ACTIVE NON-REGULATED WASTE, LIQUID, (WATER WITH TRACE HE)

		TASK HISTORY	
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject
02/24/2020 8:58 AM	1894341 EXECUTED	LANL:40 » 36:000048	NO
02/24/2020 10:00 AM	1894342 EXECUTED	LANL:36 - WDR-NRAD	NO



CONTAINER PROFILE W855901 CON-SW-OTHER

WS ID: 46444 C ID: 855901 ACTIVE

Note: Highlighted re	ow indicates co	ontainer was output or receiving container for the indicated task				
		DOCUMENTATION				
Doc. Number	Title		Uploaded By			
N/A	w855901 in	ventory.xlsx	PATRICK BRINER (324836)			
N/A	w855901 C	&C.pdf	PATRICK BRINER (324836)			
N/A	15G-HPDE	-Drum-PO-2017-202-WR1.pdf	PATRICK BRINER (324836)			
N/A	W855901 L	og Sheet.pdf	PATRICK BRINER (324836)			
		EDIT LOG				
Date Time/ User Name	Quality Record	Explanation				
02/24/2020 9:58 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for G=TSD-WDR-NR]; Reason for Edit: psn	[P=42805, C=855901]; Found [P=42805,			
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_WASTE [855901] changed from 0.0 to	100.5			
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_GROSS [855901] changed from 9.5 to 110.0				
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_GROSS [855901] changed from 0.0 to 9.5				
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_TARE [855901] changed from 0.0 to 9.5				
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.VOL_WASTE [855901] changed from null to 14.	0			
02/24/2020 9:00 AM PATRICK BRINER (324836)	YES	C_MASTER.VOL_WASTE_UNIT [855901] changed from L to	o gal			
02/24/2020 8:59 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_WASTE_UNIT [855901] changed from	n kg to lb			
02/24/2020 8:59 AM PATRICK BRINER (324836)	YES	C_MASTER.WEIGHT_TARE_UNIT [855901] changed from k	g to lb			
02/24/2020 8:59 AM PATRICK BRINER (324836)	NO	Edit Container Authorization; Looking for [P=1995101, C=855 U=ALL, B=1, G=36-GEN]; Reason for Edit: update container				
02/21/2020 12:18 PM PATRICK BRINER (324836)	YES	C_MASTER.VOL_CONTAINER [855901] changed from 5.0 to	o 14.0			
02/21/2020 12:18 PM PATRICK BRINER (324836)	YES	C_MASTER.CONTAINER_SUBTYPE_ID [855901] changed	from 31 to 32			
02/21/2020 9:18 AM PATRICK BRINER (324836)	NO	Create Container Authorization; Looking for [P=1995101, WS [P=1995101, W=47, F=55, U=ALL, B=1, G=40-GEN];	=46444, WP=221, U=1439]; Found			
02/21/2020 9:18 AM WCATS APPLICATION (000000	NO)	INITWORKPATH (C_ID=855901/PATH_ID=221): PASSED				

Attachment 4 Dissolving Post-Detonation Debris with Ammonium Bifluoride (ABF) Waste Stream Profiles 45884, 46089, and 46579



WASTE PROFILE FORM COVER SHEET

45884 APPROVED

Waste Characteriza	ation Information
Waste Stream ID:	45884
WPF ID (Legacy):	
Waste Stream Name:	CLEANING LABWARE, PREPARAING AND CONDITIONING RESIN FOR CAAC ACTIVITIES.
Expiration Date:	02/05/2022
Waste Type:	Mixed Low Level Waste for the Radioactive Liquid Waste Treatment Facility (RLWTF)
Radiological Type:	Low Level Waste
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	<u>W105</u>
	Inorganic Liquids: Acidic aqueous wastes less than 5% acid (diluted but pH <2)
EPA Source Code:	<u>G09</u>
	Wastes from Ongoing Production and Service Processes: Other production or

service-related processes from which the waste is a direct outflow or result (specify in

Waste Generation Estimates

YEAR	VOLUME
2022	4,300.00 L
2021	4,300.00 L
2020	4,300.00 L
2019	4,300.00 L
2018	4,300.00 L
2017	4,300.00 L
2016	4,300.00 L
2015	4,300.00 L

comments)



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
45884	

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z N	umber	WMC's Name (pr	rint)	Generator's Phone
120416	COLLETTI, LISA	COLLETTI, LISA 2412		MAHONEY, PATRICH		5056679621
Generator's Mail Stop	Waste Generating Group	e Generating Group Waste Stream Tech		Building Room		WMC Phone
G740	C-AAC	03		000029	wing 5, 7	5056675498
Waste Accumulation (che	eck only one)			□ Control Acquir	mulation Area	Site No:
□ Satellite Accumulation A □ Less-than-90 Days Stor □ TSDF □ Universal Waste Storag □ Used Oil for Recycle ER Use Only □ ER Site	Area Site No.			□ NM Special W □ None of the A □ PCBs Storage □ Rad Staging A □ Rad Storage	Vaste Joove e Area Area	Site No: Site No: Site No: Site No: Site No: Site No:
Method of Characterization	on (check as many as apply)					
☐ Chemical/Physical Anal ☑ Radiological Analysis ☐ PCB Analysis ☑ Acceptable Knowledge ☐ Material Safety Data Sh	lysis ☐ Attac	ned Sa ned Sa ned Documen	ample No:	al Assay Report Attac		
Section 1 - Waste Preventi	ion/Minimization (answer all	questions)				
Can hazard segregation, e	limination, or material substitu	ition be used?		Yes (provide com	nments)	☑ No
	the waste stream be recycle			Yes (provide com		☑ No
	en incorporated into procedu			I Yes		☐ No (provide comments)
Can this waste be generate	ed outside a RCA?	•		Yes (provide com		☑ No □ N/A
Comments:						
Section 2 - Chemical and F	Physical Information					
Waste Type (check only or	ne) Waste Category (che	eck all that apply)		rce (check only on		te Matrix (check only one)
☐ Unused/Unspent Chemi			Waste Soul	rce A	Gas	
☑ Process Waste/Spent	☐ Organic		☐ Decon	- D		1.5 Atmospheres Pressure
Chemical/Other	☐ Solvent (see instr			s Processing/Prod :h/Development/Te	- Lating	1.5 Atmospheres Pressure
Radiological Information	□ Degreaser (see in □ Dioxin	structions)	1	ed Maintenance	suily DL	iquified Compressed Gas
Was Waste generated in a			1	eeping - Routine	Liqu	id
✓ Yes □ No	☐ Treated Hazardou	s Waste or Residue		anup - Routine	✓A	queous
□ Non-radioactive	☐ No-Longer Contai	ned-In	☐ Samplin	g - Routine Monito	oring 🔲 N	Ion-Aqueous
☑ Radioactive - Low Level	□ Explosive Process		☐ Other (d	escribe)	□s	Suspended Solids/Aqueous
☐ Radioactive - Transurar	☐ ☐ Infectious/Medica				□s	Suspended Solids/Non-
	□ Biologicai			_	A	aqueous
Waste Destination (check	one) ☐ Beryllium ☐ Empty Container	(soo instructions)	Waste Soul		Solid	d
□swws	☐ Battery (see instru		☐ Abateme		□P	Powder/Ash/Dust
☑ RLWTF	Asbestos	10110110)	☐ Constru	ction/Upgrades	□s	Solid
□RLWTP	☐ Friable		□ Demont		□s	Sludge
☐ TA-16/HE	☐ Non-Friable			ative Derived	□ A	bsorbed/Solidified Liquid
□NTS	PCB Source Conce	ntration	☐ Orphan/)ebris
Classified Information	——— □ PCB < 50 ppm) nnm	☐ Remedia	ation/Restoration	Matr	ix Type (check only one)
☑ Unclassified	☐ PCB >= 50 - < 50 ☐ PCB >= 500 ppm	o ppm		ng (secondary)		lomogeneous
☐ Classified/Sensitive	☐ Hazardous Waste	Contaminated Soil		duled Maintenance	,	leterogeneous
	☐ Untreated Hazard			eeping (non-routine anup (non-routine)	e)	J
	☐ Commercial Solid			anup (non-routine ₎ troleum Tanks	'	
	☐ Other [Describe]		☐ Petroleu			
			☐ Other (d		Estir	mate Annual Volume (m³):
			`	•		
1	Other:		Other:			4.3000

Section 3 - Process and Waste Description

Process Description:

All actinide samples and standards are transfered to residue bottles prior to rinsing or cleaning the containers.

- 1) This WSP covers all labware rinsing.
- 2) This WSP covers all labware acid cleaning.
- 3) This WSP covers some Resin preparation.

Waste Description:

- 1) Labware in any approved activity may require rinsing with DI. Rinse water is disposed of through the Radioactive Liquid Waste Collection System. This applies to all AP, ANC, or IWDs. This extensive list can be provide upon request, but is too large to include in this system.
- 2) Labware is cleaned by one of the following proceedures:CAAC-AP-201, ANC132, ANC130 and ANC369. Labware is generally soaked in an acid or an acid cocktail for a specified time. It is then removed from the acid and rinsed. Acid rinsate is discharged to the RLWCS.
- 3) Resin is prepared and conditioned using the following proceedures: ANC130, ANC369. Acids are used to condition the resins to a specific chemical state. Acid rinsate is discharged to the RLWCS.

All nitrogen is in the form if nitrate from nitric acid.

Concentration was estimated from volumes being used in the procedure including any rinsing with industrial or deionized water. Refer to supplemental AK document for calculation regarding nitrate content.

Perchloric acid is banned at CMR per DSA. So this waste stream cannot produce perchorates.

No organics are introduced in the processes associated with this waste stream and therefore COD and TTO is expected to be nondetect.. No salts therefore no TDS or TSS.

Section 4 - Characteristics							
Ignitability (check only one)	Corrosi	vity (ched	ck only o	ne) (pH)	Reactivity (check as many as apply)	Boiling F	Point (check only one)
□ < 73 F (< 22.8 C)	⊠ <= 2.0		-/ (1 /	□ RCRA Unstable		F (<= 35 C)	
□ 73 - 99 F (22.8 - 37.2 C)	□ 2.1 - 4.0			☐ Water Reactive		(> 35 C)	
	□ 4.1 - 6.0						
□ 100 - 139 F (37.8 - 59.4 C)					☐ Cyanide Bearing	□ NOt A	pplicable
☐ 140 - 200 F (60.0 - 99.3 C)	□ 6.1 - 9				☐ Sulfide Bearing		
□ > 200 (> 99.3 C)	□ 9.1 -	12.4			☐ Pyrophoric		
☐ EPA Ignitable - Non-liquid	□>= 12	2.5			☐ Shock Sensitive		
☐ DOT Flammable Gas	Liquid	d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.]		
□ DOT Oxidizer		aqueous			☑ Non-Reactive		
☑ Not Ignitable		. 4					
□ Not ignitable							
	C	haracteriz	ation Met	hod	Concentration of Contaminant		
		i a a a a a a a a a a a a a a a a a a a	ation wice	None or	Contaminant present at	3	1
Identify for all contaminants listed	AK	TCLP	Total	Non-detect			Regulatory Limit
Toxicity Characteristic Metals	741		, iotai	iton dotoot	(10,000 ppm = 1%)		
Arsenic	V			\square	to	ppm	5.0 ppm
Barium	Ø			<u> </u>	to	ppm	100.0 ppm
Cadmium	<u> </u>			<u> </u>	to		
				<u> </u>	to	ppm	1.0 ppm
Chromium						ppm	5.0 ppm
Lead	☑			✓	to	ppm	5.0 ppm
Mercury	Ø			☑		ppm	0.2 ppm
Selenium	Ø			\square	to	ppm	1.0 ppm
Silver	\square			\square	to	ppm	5.0 ppm
Toxicity Characteristic Organics							
Benzene	$\overline{\mathbf{A}}$			\square	to	ppm	0.5 ppm
Carbon tetrachloride	Ø			Ø	to	ppm	0.5 ppm
Chlorobenzene	<u> </u>	П		\square	to	ppm	100.0 ppm
Chloroform	<u> </u>			<u> </u>	to	ppm	6.0 ppm
Cresol	Ø	H		<u> </u>	to	ppm	200.0 ppm
p-Cresol	Ø			<u> </u>	to		
 •			1		to	ppm	200.0 ppm
m-Cresol	Ø			<u> </u>		ppm	200.0 ppm
o-Cresol	☑			✓	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☑			✓	to	ppm	7.5 ppm
1,2-Dichloroethane	Ø			☑		ppm	0.5 ppm
1,1-Dichloroethylene	\square			\square	to	ppm	0.7 ppm
2,4-Dinitrotoluene	\square			\square	to	ppm	0.13 ppm
Hexachlorobenzene	$\overline{\Delta}$			\square	to	ppm	0.13 ppm
Hexachlorobutadiene	$\overline{\mathbf{A}}$			\square	to	ppm	0.5 ppm
Hexachloroethane	Ø			Ø	to	ppm	3.0 ppm
Methyl ethyl ketone	Ø			\square	to	ppm	200.0 ppm
Nitrobenzene	<u> </u>	П		<u> </u>		ppm	2.0 ppm
Pentachlorophenol	<u> </u>			$\overline{\square}$	to	ppm	100.0 ppm
Pyridine	<u> </u>			<u> </u>	to	ppm	5.0 ppm
	Ø	H	H	<u> </u>	to		0.7 ppm
Tetrachloroethylene	<u> </u>	=		<u> </u>	to	ppm	- '- '-
Trichloroethylene						ppm	0.5 ppm
2,4,6-Trichlorophenol	<u> </u>					ppm	2.0 ppm
2,4,5-Trichlorophenol	Ø			\square		ppm	400.0 ppm
Vinyl chloride	$\overline{\mathbf{A}}$			\square	to	ppm	0.2 ppm
Herbicides and Pesticides							
Chlordane	$\overline{\mathbf{A}}$			Ø	to	ppm	0.03 ppm
2,4-D	<u> </u>			$\overline{\square}$		ppm	10.0 ppm
Endrin	<u> </u>			$\overline{\square}$		ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			<u> </u>		ppm	0.008 ppm
Lindane (gamma-BHC)	Ø			V	to	ppm	0.4 ppm
Methoxychlor	<u> </u>			<u> </u>		ppm	10.0 ppm
2,4,5-TP (Silvex)	<u> </u>			<u> </u>			1.0 ppm
	<u> </u>			<u> </u>	to	ppm	0.5 ppm
Toxaphene	<u> </u>			<u> </u>	ı.U	ppm	U.5 PHIII

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppn	n) Maximum (ppn				
	Hydroiodic Acid [10034-85-2]	0	to 1000				
7664-39-3	Hydrofluoric acid		to 1				
	Hydrobrominc acid		to 1000				
7732-18-5	Water	00000	to 1000000				
7664-93-9	Sulfuric acid		to 1				
7697-37-2	Nitric acid	-	to 1				
7647-01-0	Hydrochloric acid		to 1				
	No Chromix by Godax Laboratories. Inorganic Persulfate (oxidizer)	0	to 2000				
	Tatal of many manager of this continuous of		400 40 in 0/				
	Total of max. ranges of this section and page 2 Additional Information		100.40 in %				
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pro	ovide it below				
	form if nitrate from nitric acid.	•					
Perchloric acid is bar No organics are intro	Concentration was estimated from volumes being used in the procedure including any rinsing with industrial or deionized water. Perchloric acid is banned at CMR per DSA. So this waste stream cannot produce perchorates. No organics are introduced in the processes associated with this waste stream and therefore COD and TTO is expected to be nondetect No salts therefore no TDS or TSS.						
Section 6 - Work Cor	ntrol Documentation						
Do the procedures for	or this process cover how to manage this waste?	mments)					
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentration ners? ☑ Yes ☐ No (provide comments)	ns or addition or	removal of				
Comments:							
Section 7 - Packagin	g and Storage Control						
Describe how the wa	ste will be packaged in according to the applicable WAC.						
Discharged through t	Discharged through the RLWCS. The chemicals that are combined in this waste stream are compatible with each other and the RLWCS. No adverse reactions are expected.						
Identify the storage n	nanagement controls that will be used for this waste stream: (check all that apply)						
☐ Tamper Indication	Devices ☐ Limited use locks with log-in for waste ☐ Locked cabinet or building ☐ Oth	er (describe)					

Section 8 - Waste Certification Statements ☐ Waste appears to meet WAC attachment for: MLLW-RLWTF ☑ Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: FRANCES MARTIN (107515) Date: 02/05/19 01:02 PM Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Date: Signature: STEVE TORREZ (117028) 02/05/19 01:02 PM RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Signature: ANDY ELICIO (118692) Date: 02/05/19 01:04 PM RLWTF Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of

Date:

02/05/19 01:14 PM

the applicable WAC.

Signature: JOHN DEL SIGNORE (113532)

Attachment 4 - LDR and UHC

	/ttaoiiiioiit i EBit aiie	. 00	
Identify category and presence o	f any constituents listed below (equal to or above lin	nit).	
Non-Wastewater/Wastewater C	ategory (check only one)	,	
☐ Non Wastewater ☑ ¹	Wastewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1
Notifications and Certifications	- Check the appilcable boxes		
Generator Requirements:			
☐ This shipment contains haza	rdous waste contaminated soil that does not meet tre	eatment standards	Sign Certification #2
	ated hazardous debris to be treated to 40 CFR 268.4		(No certification)
	oil) meeting treatment standards at point of generation		Sign Certification #3
☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation			Sign Certification #4
TSDF or Generator Treatment:			
☐ TSDF treated hazardous del	bris meeting the alternative treatment standards of 4	0 CFR 268.45	Sign Certification #5
☐ Generator treated hazardous	Sign Certification #6		
☐ Hazardous wastes contamin	ated soil treated to 40 CFR 268.49		Sign Certification #7
☐ Wastes or residues from cha	aracteristic hazardous waste treatment meeting treat	ment standards and UTS	Sign Certification #8
☐ Wastes or residues from cha	aracteristic hazardous waste treatment not meeting t	JTS	Sign Certification #9
☐ Other TSDF wastes meeting	the more stringent 40 CFR 268.40 treatment standa	ards to be land disposed	Sign Certification #10
☐ Other generator wastes mee	eting the more stringent 40 CFR 268.40 treatment sta	andards to be land disposed	Sign Certification #11
	Notification of Underlying Hazardo	ous Constituents	

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

ΔV	No Underlying Hazardous Constituents in this waste stream.							
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS			
	Organic Constituents			(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0			
	Acenaphthylene	208-96-8		3.4	34.0			
	Acetone	67-64-1	0.28	160.0	1600.0			
	Acetonitrile	75-05-8		38.0	380.0			
	Acetophenone	98-86-2		9.7	97.0			
	2-Acetylaminofluorene	53-96-3		140.0	1400.0			
	Acrolein	107-02-8		N/A	N/A			
	Acrylamide	79-06-1	19.0	23.0	230.0			
	Acrylonitrile	107-13-1	0.24	84.0	840.0			
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8			
	Aldrin	309-00-2	0.021	0.066	0.66			
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A			
	Aniline	62-53-3	0.81	14.0	140.0			
	o-Anisidine	90-04-0	0.01	0.66	6.6			
	Anthracene	120-12-7	0.059	3.4	34.0			
	Aramite	140-57-8	0.36	N/A	N/A			
	alpha-BHC	319-84-6	0.00014	0.066	0.66			
	beta-BHC	319-85-7	0.00014	0.066	0.66			
	delta-BHC	319-86-8	0.023	0.066	0.66			
	Barban	101-27-9	0.056	1.4	14.0			
	Bendiocarb	22781-23-3	0.056	1.4	14.0			
	Benomyl	17804-35-2	0.056	1.4	14.0			
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0			
	Benzal chloride	98-87-3	0.055	6.0	60.0			
	Benzene	71-43-2	0.14	10.0	100.0			
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0			
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0			
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0			
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0			
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0			
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0			
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0			
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0			
	Bromodichloromethane	75-27-4	0.35	15.0	150.0			
	Bromomethane	74-83-9	0.11	15.0	150.0			
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0			
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0			
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0			
	Butylate	2008-41-5	0.042	1.4	14.0			
	Carbaryl	63-25-2		0.14	1.4			

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7		5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9		3.4	34.0
H	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	
	o-Cresol	95-48-7		5.6	56.0
					56.0
<u></u>	p-Cresol	106-44-5		5.6	56.0
<u>_</u>	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
_	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6	0.0039	0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1		6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
ö	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
_	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin Diethyl phthelete	60-57-1		0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
	Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endosulari sullate Endrin	72-20-8	0.0028	0.13	1.3
	Endrin aldehyde	7421-93-4	0.0028	0.13	1.3
	Ethyl acetate	141-78-6	0.025	33.0	330.0
	,				
	Ethyl benzene	100-41-4	0.057	10.0	100.0
무	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
	Ethylene oxide	75-21-8	0.12	N/A	N/A
	Famphur	52-85-7	0.017	15.0	150.0
	Fluoranthene	206-44-0	0.068	3.4	34.0
	Fluorene	86-73-7	0.059	3.4	34.0
	Fluoride	16984-48-8	35.0	N/A	N/A
	Formetanate hydrochloride	23422-53-9	0.056	1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
	Hexachlorobenzene	118-74-1	0.055	10.0	100.0
	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
	Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
	Hexachloroethane	67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7	0.035	30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5	0.0055	3.4	34.0
	lodomethane	74-88-4	0.19	65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
H	Lindane (gamma-BHC)	58-89-9	0.0017	0.066	0.66
	Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
	Methacrylonitrile	126-98-7	0.24	84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5	0.081	1.5	15.0
	Methiocarb	2032-65-7	0.056	1.4	14.0
-	Methomyl	16752-77-5	0.028	0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
	Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0
	Methyl methacrylate	80-62-6	0.14	160.0	1600.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6	0.028	28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5	0.028	13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2	0.042	1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8	0.059	5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2	0.021	4.6	46.0
Phthalic acid	100-21-0	0.055	28.0	280.0
Phthalic anhydride	85-44-9	0.055	28.0	280.0
Physostigmine	57-47-6	0.056	1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5	0.093	1.5	15.0
Propanenitrile	107-12-0	0.24	360.0	3600.0
Propham	122-42-9	0.056	1.4	14.0
Propoxur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9	0.042	1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8	14.0	N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
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Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 and TA-21)

		For he	elp in compl	eting th	nis section, call 7-43	301.			
Indicate if waste w	'	produced [Reactor Pi	roduce	d ☑ Other (de	scribe in WPF Section	1 "Waste/P	rocess Desci	ription")
Radionuclide Con	taminants								
Identify for the following	Present at or Below LOC (in Ci/I)	Range if abo	ove LOC in Ma		Identify for the following	Present at or Below LOC (in Ci/l)	Range if Min.	above LOC	in Ci/L Max.
As-74	□ ≤ 1.0E-07				Rb-84	□ ≤ 5.0E-08			
Be-7	□ ≤ 1.0E-07				Sc-46	□ ≤ 1.0E-07			
Ce-141	□ ≤ 1.0E-07				Sc-48	□ ≤ 1.0E-07			
Co-56	□ ≤ 1.0E-08				Se-75	□ ≤ 1.0E-07			
Co-57	□ ≤ 1.0E-07				Sn-113	□≤ 1.0E-07			
Co-58	□ ≤ 1.0E-07				Sr-85	□≤1.0E-07			
Co-60	□ ≤ 2.0E-08				Sr-89	□≤1.0E-07			
Cs-134	□ ≤ 1.0E-08				Sr-90	□ ≤ 5.0E-09			
Cs-137	□ ≤ 1.0E-08				V-48	□≤1.0E-07			
Eu-152	□ ≤ 1.0E-07				Y-88	□≤ 1.0E-07			
H-3	□ ≤ 2.0E-08				Zn-65	□ ≤ 4.0E-08			
I-133	□ ≤ 5.0E-08				Am-241	☑ ≤ 1.0E-07			
Mn-52	□ ≤ 1.0E-07				Pu-238	☑ ≤ 1.0E-07			
Mn-54	□ ≤ 1.0E-07				Pu-239	☑ ≤ 1.0E-07			
Na-22	□ ≤ 5.0E-08				U-234	☑ ≤ 1.0E-07			
Ra-226	□ ≤ 2.5E-10				U-235	☑ ≤ 1.0E-09			
Ra-228	□ ≤ 2.5E-10				U-238	☑ ≤ 1.0E-09			
Rb-83	□ ≤ 1.0E-07				Th-232	☑ ≤ 1.0E-10			
Other Contaminar					111 202				
Metal	Present Below LOC	Range if abo	ve I OC in i	opm	Additional	Contaminants	Min.	Max.	
Contaminants	(in ppm or mg/L)	Min.	Ma		Chemical Oxygen [0.	0.	mg/L
Aluminum	□ ≤ 50.0				Total Suspended S	olids (TSS)	0.	0.	mg/L
Boron	□ ≤ 50.0				Total Dissolved Sol	ids (TDS)	0.	0.	mg/L
Cobalt	□ ≤ 5.0				Perchlorate		0.	0.	mg/L
Copper	□ ≤ 10.0				Total Toxic Organic	s (TTO)	0.	0.	mg/L
Vanadium	□≤1.0				Nitrogen (Total)		0.	0.	mg/L
Zinc	□≤100				Total Nitrates		0.	1.	mg/L
	Radioactive Contam	inant Totals				For TA-55 Us	e Only		
To	otal Alpha	0.00 Ci/L			Wastewater will b	e discharged through	one of the fo	ollowing:	
	otal Beta	0.00 Ci/L			☐ Acid Line	☐ Caustic Line*		ustrial Waste	Line
	otal Gamma	0.00 Ci/L			* pH must be grea				
	<u> </u>								
Chemical Treatme	ent for Boilers/Water Ch	illers:	□Yes	☑ No	Type:	Volume:			
Industrial Cleaner:	<u>:</u>		□Yes	☑ No	Type:	Volume:			
Average daily volu	ıme when discharge oc	curs: (include w	vaste volume	e plus i	rinse water volume)		17.00 L	/ day	
Maximum daily vo	lume when discharge o	ccurs : (include	waste volui	ne plu	s rinse water volum	e)	50.00 L	/ day	
Estimated number	of days per year disch	arge will occur:					250 da	ays	
Estimated total vo	Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50/TA-21: (see estimate on page 1)								



WASTE PROFILE FORM COVER SHEET

46089 APPROVED

Waste Characterization I	Information
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Waste Stream ID:	46089
WPF ID (Legacy):	
Waste Stream Name:	RINSE WATER FROM ANALYTICAL INSTRUMENTS
Expiration Date:	12/11/2021
Waste Type:	Mixed Low Level Waste for the Radioactive Liquid Waste Treatment Facility (RLWTF)
Radiological Type:	Low Level Waste
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	ACIDIC
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	W105
	Inorganic Liquids: Acidic aqueous wastes less than 5% acid (diluted but pH <2)
EPA Source Code:	<u>G09</u>
	Wastes from Ongoing Production and Service Processes: Other production or service-related processes from which the waste is a direct outflow or result (specify in

Waste Generation Estimates

YEAR	VOLUME
2021	500.00 L
2020	500.00 L
2019	500.00 L
2018	750.00 L



WASTE PROFILE FORM

Reference Number						
WCATS ID	Legacy WPF ID					
46089						

Generator's Z Number	Waste Generator's Name (p.	rint) WMC's Z Nu	ımber	mber WMC's Name (print)		Generator's Phone
214187	REARICK, MICHAEL	120	202	BISHOF	P, TONY	5056671224
Generator's Mail Stop	Waste Generating Group	Waste Stream Tecl	hnical Area	Building	Room	WMC Phone
G740	CAAC	55		000400		5056658669
Waste Accumulation (che	eck only one)	•		□ Central Accur	mulation Area Site	No:
☐ Satellite Accumulation /	Area Site No	:		☐ NM Special W		No:
☐ Less-than-90 Days Stor	rage Area Site No	:		☑ None of the A	bove Site	No:
□TSDF	Site No	:		☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag		:		☐ Rad Staging /	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site No	:		☐ Rad Storage	Area Sile	No:
☐ ER Site	S/MMII/AOC N	0				
	on (check as many as apply)	o				
	, , , , , , , , , , , , , , , , , , , ,	had Ca	mala Na.			
☐ Chemical/Physical Ana ☐ Radiological Analysis	lysis □ Attac		imple No: imple No:			
☐ PCB Analysis	□ Attac		imple No:			
☑ Acceptable Knowledge	Documentation ☑ Attac			Comments WSP 460	089. WEF	
☐ Material Safety Data SI	heet (MSDS) ☐ Attac	hed				
Section 1 - Waste Prevent	ion/Minimization (answer al	questions)				
Can hazard segregation, e	elimination, or material substit	ution be used?		Yes (provide com	nments) 🗹 N	0
Can any of the materials in	n the waste stream be recycle	d or reused?		Yes (provide com	nments) 🗹 N	0
Has waste minimization be	een incorporated into procedu	ires or other process	controls? ☑	Yes	□N	o (provide comments)
Can this waste be generat	ed outside a RCA?			Yes (provide com	nments) ☑ N	o □ N/A
Comments:						
Section 2 - Chemical and	Physical Information					
Waste Type (check only o		eck all that apply)	Waste Sour	ce (check only on	e) Waste M	atrix (check only one)
☐ Unused/Unspent Chem		oon an trat appry)	Waste Sour		Gas	attin (oncon only onc)
☑ Process Waste/Spent	□ Organic		☐ Decon		□≤1.5 /	Atmospheres Pressure
Chemical/Other .	☐ Solvent (see instr		☐ Materials	. D	uction	
Padiological Information	□ Degreaser (see ir	nstructions)		s Processing/Prod	—	Atmospheres Pressure
Was Waste generated in a	Radiological Information			h/Development/Te	ating	Atmospheres Pressure led Compressed Gas
✓ Yes □ No	l –	,	☑ Researc □ Schedul	h/Development/Te ed Maintenance	ating	•
	RCA?	,	☑ Researc □ Schedul □ Houseke	h/Development/Te ed Maintenance eeping - Routine	esting	ed Compressed Gas
	RCA?	us Waste or Residue	☐ Researc ☐ Schedule ☐ Houseke	h/Development/Te ed Maintenance	esting ☐ Liquif Liquid ☑ Aque	ed Compressed Gas
☐ Non-radioactive	RCA? ☐ Electroplating ☐ Treated Hazardol ☐ No-Longer Conta ☐ Explosive Proces	us Waste or Residue ined-In s	☐ Researc ☐ Schedule ☐ Houseke	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito	Esting ☐ Liquif Liquid ☐ Aqueoring ☐ Non-A	ed Compressed Gas
	RCA? ☐ Electroplating ☐ Treated Hazardol ☐ No-Longer Conta ☐ Explosive Proces ☐ Infectious/Medica	us Waste or Residue ined-In s	☑ Researc □ Schedul □ Houseke □ Spill Cle □ Sampling	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito	esting ☐ Liquif Liquid ☐ Aquee oring ☐ Non-A ☐ Suspe ☐ Suspe	ed Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
☐ Non-radioactive ☑ Radioactive - Low Leve ☐ Radioactive - Transura	RCA? ☐ Electroplating ☐ Treated Hazardor ☐ No-Longer Conta ☐ Explosive Proces ☐ Infectious/Medica ☐ Biological ☐ Boarding	us Waste or Residue ined-In s	☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Sampline ☐ Other (d	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	esting	ed Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
☐ Non-radioactive ☐ Radioactive - Low Leve ☐ Radioactive - Transuran Waste Destination (check	RCA? ☐ Electroplating ☐ Treated Hazardoi ☐ No-Longer Conta ☐ Explosive Proces ☐ Infectious/Medica ☐ Biological ☐ Beryllium	us Waste or Residue ined-In s	☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Sampling ☐ Other (d	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe)	esting ☐ Liquif Liquid ☐ Aquee □ Non-A ☐ Suspe ☐ Suspe Aquee Solid	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS	RCA? ☐ Electroplating ☐ Treated Hazardor ☐ No-Longer Conta ☐ Explosive Proces ☐ Infectious/Medica ☐ Biological ☐ Boarding	us Waste or Residue ined-In s I (see instructions)	☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Sampline ☐ Other (d	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent	esting ☐ Liquif Liquid ☐ Aquee ☐ Non-A ☐ Suspe ☐ Aquee Solid ☐ Powd	ed Compressed Gas ous Aqueous ended Solids/Aqueous ended Solids/Non-
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF	RCA?	us Waste or Residue ined-In s I (see instructions)	☐ Researc ☐ Schedul ☐ Houseke ☐ Spill Cle ☐ Sampline ☐ Other (d	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades	esting ☐ Liquif Liquid ☐ Aquee Pring ☐ Non-A ☐ Suspe Aquee Solid ☐ Powd ☐ Solid	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP	RCA?	us Waste or Residue ined-In s I (see instructions)	☐ Researce ☐ Schedule ☐ Housekee ☐ Spill Cle ☐ Sampline ☐ Other (decorated) ☐ Waste Soure ☐ Abatemee ☐ Construct	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on	esting ☐ Liquif Liquid ☐ Aquee Pring ☐ Non-A ☐ Suspe Aquee Solid ☐ Powd ☐ Solid ☐ Sludg	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE	RCA?	us Waste or Residue ined-In s il (see instructions) uctions)	Researce Schedul Houseke Spill Cle Sampline Other (d Waste Sour Abateme Construct Demolitic Decon/D	h/Development/Te ed Maintenance eeping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on decom ative Derived	esting ☐ Liquif Liquid ☐ Aquee ☐ Non-A ☐ Suspe ☐ Aquee Solid ☐ Powd ☐ Solid ☐ Sludg ☐ Absol	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus Er/Ash/Dust Eer/Ash/Dust Eer/bed/Solidified Liquid
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP	RCA?	us Waste or Residue ined-In s il (see instructions) uctions)	Researce Schedul Houseke Spill Cle Sampline Other (d Waste Sour Abateme Construe Decon/D Investiga Orphan/	h/Development/Te ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on decom ative Derived Legacy	esting ☐ Liquif Liquid ☐ Aquee ☐ Non-A ☐ Suspe Aquee Solid ☐ Powd ☐ Solid ☐ Sludg ☐ Absor ☐ Debri	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust e Ebed/Solidified Liquid Es
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transuran Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE	RCA?	us Waste or Residue ined-In s il (see instructions) uctions)	Researce Schedult Houseke Spill Cle Sampling Other (d Waste Sour Abateme Construct Demolitit Decon/D Investigat Remedia	h/Development/Te ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration	esting	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust e Ded/Solidified Liquid s ype (check only one)
□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transural Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information □ Unclassified	RCA?	us Waste or Residue ined-In s il (see instructions) uctions)	Researce Schedul Houseke Spill Cle Sampline Other (d Waste Sour Abateme Construe Decon/D Investiga Orphan/	h/Development/Te ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on etive Derived Legacy ation/Restoration ng (secondary)	esting ☐ Liquif Liquid ☐ Aquee ☐ Non-A ☐ Suspe Aquee Solid ☐ Powd ☐ Solid ☐ Sludg ☐ Absor ☐ Debris ☐ Home	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust e Ded/Solidified Liquid s Uppe (check only one) Upgeneous
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□ Non-radioactive □ Radioactive - Low Leve □ Radioactive - Transural Waste Destination (check □ SWWS □ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information □ Unclassified	RCA?	us Waste or Residue ined-In s I (see instructions) uctions) entration 0 ppm e Contaminated Soil dous Debris	□ Researce □ Schedule □ Housekee □ Spill Cle □ Sampline □ Other (d □ Waste Soure □ Abatemee □ Construce □ Decon/D □ Investigae □ Orphan/l □ Remediae □ Repackiee □ Housekeee □ Spill Cle □ Non-Pet	h/Development/Te ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) rce B ent ction/Upgrades on ecom ative Derived Legacy ation/Restoration ng (secondary) duled Maintenance eping (non-routine) anup (non-routine) roleum Tanks m Tanks	Liquif Liquid Aquee Non-A Suspe Aquee Solid Powd Solid Solid Absor Debri Heter	ded Compressed Gas Dus Aqueous Ended Solids/Aqueous Ended Solids/Non- Dus er/Ash/Dust e Ded/Solidified Liquid s Uppe (check only one) Upgeneous

Section 3 - Process and Waste Des	cription						
Process Description: AQUEOUS ACID WASTE GENERAT	TED FRO	M ANALY	TICAL II	NSTRUMEN	ITS. CONSISTS OF INSTR	UMENT RINSE	AND EXCESS SAMPLE.
Waste Description: Instrument rinse and excess sample Waste is 0 - 2% nitric acid in deionize						100 times by the	rinse during the process.
Section 4 - Characteristics							
Ignitability (check only one)		vity (ched	ck only o	ne) (pH)	Reactivity (check as many	as apply) Boili	ng Point (check only one)
□ < 73 F (< 22.8 C)	☑ <= 2.				☐ RCRA Unstable		= 95 F (<= 35 C)
□ 73 - 99 F (22.8 - 37.2 C) □ 100 - 139 F (37.8 - 59.4 C)	□ 2.1 - ·				☐ Water Reactive ☐ Cyanide Bearing		95 F (> 35 C) lot Applicable
□ 140 - 139 F (57.8 - 39.4 C) □ 140 - 200 F (60.0 - 99.3 C)	□ 6.1 -				☐ Sulfide Bearing		ot Applicable
□ > 200 (> 99.3 C)	□9.1 -				☐ Pyrophoric		
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive	D: 1	
□ DOT Flammable Gas □ DOT Oxidizer		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT ☐ Non-Reactive	DIV.]	
☑ Not Ignitable	L NOII-	aqueous			- Non-reactive		
	С	haracteriz	ation Met	hod None or	Concentration of Co Contaminant pr		
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Max	iumum	Regulatory Limit
Toxicity Characteristic Metals Arsenic	V				(10,000 ppm 0.01 to	= 1%) 0.5 ppm	5.0 ppm
Barium	<u> </u>				0.01 to	10 ppm	100.0 ppm
Cadmium	Ø				0.01 to	0.1 ppm	1.0 ppm
Chromium	<u> </u>	<u> </u>			0.01 to	0.5 ppm	5.0 ppm
<u>Lead</u> Mercury	<u> </u>				0.01 to 0.01 to	0.5 ppm 0.02 ppm	5.0 ppm 0.2 ppm
Selenium	V	-			0.01 to	0.1 ppm	1.0 ppm
Silver	V				0.01 to	0.5 ppm	5.0 ppm
Toxicity Characteristic Organics Benzene	V			\square	to	nnm	0.5 ppm
Carbon tetrachloride	<u> </u>			<u> </u>	to	ppm ppm	0.5 ppm
Chlorobenzene	$\overline{\mathbf{A}}$			\square	to	ppm	100.0 ppm
Chloroform	<u> </u>		<u> </u>	Ø	to	ppm	6.0 ppm
Cresol p-Cresol	<u> </u>			<u> </u>	to to	ppm ppm	200.0 ppm 200.0 ppm
m-Cresol	<u> </u>			<u> </u>	to	ppm	200.0 ppm
o-Cresol	<u> </u>			Ø	to	ppm	200.0 ppm
1,4-Dichlorobenzene	<u> </u>			<u> </u>	to	ppm	7.5 ppm
1,2-Dichloroethane 1,1-Dichloroethylene	<u> </u>			<u> </u>	to to	ppm ppm	0.5 ppm 0.7 ppm
2,4-Dinitrotoluene	Ø			Ø	to	ppm	0.13 ppm
Hexachlorobenzene	Ø			Ø	to	ppm	0.13 ppm
Hexachlorobutadiene	☑			<u> </u>	to	ppm	0.5 ppm
Hexachloroethane Methyl ethyl ketone	<u> </u>			<u> </u>	to to	ppm ppm	3.0 ppm 200.0 ppm
Nitrobenzene	<u> </u>			<u> </u>	to	ppm	2.0 ppm
Pentachlorophenol	V			<u> </u>	to	ppm	100.0 ppm
Pyridine Tetrachloroethylene	<u> </u>			<u> </u>	to to	ppm	5.0 ppm
Trichloroethylene	<u> </u>		-	<u> </u>	to	ppm ppm	0.7 ppm 0.5 ppm
2,4,6-Trichlorophenol	<u></u>			\square	to	ppm	2.0 ppm
2,4,5-Trichlorophenol	☑		므	Ø	to	ppm	400.0 ppm
Vinyl chloride Herbicides and Pesticides	V			✓	to	ppm	0.2 ppm
Chlordane	\square			\square	to	ppm	0.03 ppm
2,4-D	$\overline{\mathbf{V}}$			\square	to	ppm	10.0 ppm
Endrin	☑ ☑			<u> </u>	to	ppm	0.02 ppm
Heptachlor (& its epoxide) Lindane (gamma-BHC)	<u> </u>			<u> </u>	to to	ppm ppm	0.008 ppm 0.4 ppm
Methoxychlor	V			<u> </u>	to	ppm	10.0 ppm
2,4,5-TP (Silvex)	V			Ø	to	ppm	1.0 ppm
Toxaphene	\square			✓	to	ppm	0.5 ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)	Maximum (ppm)
	WATER	950000 to	1000000
	HNO3[NITRIC ACID]	0 to	20000
	Total of max. ranges of this section and page 2		102.00 in %
	Additional Information		
	on is available on the chemical, physical, or radiological character of the waste not covered		
	Profile replaces WSP 42392. The process and waste stream remain the same, however ac and strengthen characterization.	Iditional documenta	tion has been
uploaded to improve	and strengthen characterization.		
	GENERATED DURING THE ANALYSIS OF PU PROCESSING SAMPLES FROM TA55.		
RIGOROUS DIGES	FION WHICH DESTROYS ORGANICS. ALL WASTE IS IN SOLUTION, 0-2% HNO3. RCR.	A METALS CONCE	ENTRATIONS
	LATORY LIMITS DUE TO THE DILUTION INHERENT IN THE ANALYTICAL PROCESS. INSTRUMENTS OPERATED UNDER C-AAC ANALYTICAL PROCEDURES.	THE STREAM CON	/IES FROM
ICI ALG AIIG ICI WG	INSTRUMENTS OF EIRTED SINDER C-AAC ANALTHCALT ROCEDURES.		
	being discharged to the RLWTF for treatment. RLWTF is a Waste Water Treatment Unit	(WWTU) that is per	mitted by the
NMED and has an N	PDES permit through the CWA.		
Section 6 - Work Cor	ntrol Documentation		
Do the procedures for	or this process cover how to manage this waste?	mments)	
Do the procedures for	or this process address controls to prevent changes to waste constituents and concentratio	ns or addition or rei	moval of
waste to/from contai	ners? ☑ Yes ☐ No (provide comments)		
Comments:			
Section 7 - Packagin	g and Storage Control		
Describe how the wa	ste will be packaged in according to the applicable WAC.		
Radioactive Liquid W	aste to be disposed of into the RLWCS. The waste stream is compatible with the line goin	g to the RLWTF.	
	·		
Identify the storage n	nanagement controls that will be used for this waste stream: (check all that apply)		
1	•	er (describe) RLLIC	OB Controlled Acces
		(22 23/11/01/04 / 10000

Section 8 - Waste Certification Statements ☐ Waste appears to meet WAC attachment for: MLLW-RLWTF Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: MICHAEL REARICK (214187) Date: 12/11/18 09:41 AM Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Date: Signature: TONY BISHOP (120202) 12/11/18 09:54 AM RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Signature: ROBERT MOLTER (239137) Date: 12/11/18 12:26 PM RLWTF Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and

accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: JOHN DEL SIGNORE (113532)

Date:

12/11/18 12:59 PM

		Att	achment 4 - LDR	and UHC					
	tify category and presence of any constituents		(equal to or abov	e limit).					
	-Wastewater/Wastewater Category (check o			—					
	Non Wastewater			☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1				
	neations and certifications - officer the apparent	ilicable box	-						
	This shipment contains hazardous waste conta	minated soil	that does not me	et treatment standards	Sign Certification #2				
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards (No cer									
	Hazardous wastes (except soil) meeting treatm				Sign Certification #3				
	Hazardous wastes contaminated soil meeting t	reatment sta	indards at point of	generation	Sign Certification #4				
_	F or Generator Treatment:								
	□ TSDF treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 □ Generator treated hazardous debris meeting the alternative treatment standards of 40 CFR 268.45 Sign Certification #6 Sign Certification #6								
	☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49 Sign Certification #7								
	☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS Sign Certification #8								
	Wastes or residues from characteristic hazard				Sign Certification #9				
	Other TSDF wastes meeting the more stringer	nt 40 CFR 26	88.40 treatment st	andards to be land disposed	Sign Certification #10				
	Other generator wastes meeting the more string				Sign Certification #11				
				ardous Constituents					
	(Check the applicable underlying cons			on levels for D001 through D043 ch	aracterstic wastes only)				
U /	No Underlying Hazardous Constituents in th	iis waste sti	ream. Wastewater	Non Wastewater Standard					
	Organic Constituents	CASRN			Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0				
	Acenaphthylene	208-96-8		3.4	34.0				
	Acetone	67-64-1		160.0	1600.0				
	Acetonitrile	75-05-8		38.0	380.0				
	Acetophenone	98-86-2		9.7	97.0				
	2-Acetylaminofluorene	53-96-3		140.0	1400.0				
	Acrolein	107-02-8		N/A	N/A				
	Acrylamide	79-06-1	19.0	23.0	230.0				
	Acrylonitrile	107-13-1		84.0	840.0				
	Aldicarb sulfone	1646-88-4		0.28	2.8				
	Aldrin	309-00-2	0.021	0.066	0.66				
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A				
	Aniline	62-53-3	0.81	14.0	140.0				
	o-Anisidine	90-04-0	0.01	0.66	6.6				
	Anthracene	120-12-7	0.059	3.4	34.0				
	Aramite	140-57-8	0.36	N/A	N/A				
	alpha-BHC	319-84-6	0.00014	0.066	0.66				
	beta-BHC	319-85-7	0.00014	0.066	0.66				
	delta-BHC	319-86-8	0.023	0.066	0.66				
	Barban	101-27-9	0.056	1.4	14.0				
	Bendiocarb	22781-23-3	0.056	1.4	14.0				
	Benomyl	17804-35-2	0.056	1.4	14.0				
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0				
	Benzal chloride	98-87-3	0.055	6.0	60.0				
	Benzene	71-43-2	0.14	10.0	100.0				
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0				
	Benzo[a]pyrene	50-32-8		3.4	34.0				
	Benzo[ghi]perylene	191-24-2		1.8	18.0				
	Benzo[k]fluoranthene	207-08-9		6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1		7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0				
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0				

□ Bromodichloromethane

☐ 4-Bromophenyl phenyl ether

Butyl benzyl phthalate

□ Bromomethane

□ n-Butyl alchohol

Butylate

□ Carbaryl

150.0

150.0

150.0

26.0

280.0

14.0

1.4

0.35

0.11

0.055

5.6

0.017

0.042

0.006

15.0

15.0

15.0

2.6

28.0

1.4

0.14

75-27-4

74-83-9

101-55-3

71-36-3

85-68-7

63-25-2

2008-41-5

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7		1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	56.0
=	o-Cresol	95-48-7		5.6	56.0
		106-44-5		5.6	56.0
_	p-Cresol	64-00-6		1.4	
	m-Cumenyl methylcarbamate				14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
<u>_</u>	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
<u>_</u>	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
<u></u>	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
<u> </u>	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
<u></u>	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
<u></u>	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
	13.46 (WCATS PA)	J -00-Z	into d 2/0/2021 10.	+	Dags 6 of 10

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3		28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7		N/A	N/A
Disulfoton	298-04-4		6.2	62.0
Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4		1.4	14.0
Endosulfan I	959-98-8		0.066	0.66
Endosulfan II	33213-65-9		0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8		0.13	1.3
Endrin aldehyde	7421-93-4		0.13	1.3
Ethyl acetate	141-78-6		33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7		160.0	1600.0
Ethyl methacrylate	97-63-2		160.0	1600.0
Ethylene oxide	75-21-8		N/A	N/A
Famphur	52-85-7		15.0	150.0
Fluoranthene	206-44-0		3.4	34.0
Fluorene	86-73-7		3.4	34.0
Fluoride	16984-48-8		N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8		0.066	0.66
Heptachlor epoxide	1024-57-3		0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
	87-68-3 77-47-4		5.6	56.0
Hexachlorocyclopentadiene Hexachloroethane			2.4 30.0	24.0
	67-72-1 1888-71-7	0.055 0.035	30.0	300.0
Hexachloropropene HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	300.0
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
lodomethane	74-88-4		65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*		0.2	2.0
Methacrylonitrile	126-98-7		84.0	840.0
Methanol	67-56-1		0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7		1.4	14.0
Methomyl	16752-77-5		0.14	1.4
Methoxychlor	72-43-5		0.18	1.8
Methyl ethyl ketone	78-93-3		36.0	360.0
Methyl isobutyl ketone	108-10-1		33.0	330.0
Methyl methacrylate	80-62-6		160.0	1600.0
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	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5	0.028	13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2	0.042	1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8	0.059	5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2	0.021	4.6	46.0
	Phthalic acid	100-21-0	0.055	28.0	280.0
	Phthalic anhydride	85-44-9	0.055	28.0	280.0
	Physostigmine	57-47-6	0.056	1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5	0.093	1.5	15.0
	Propanenitrile	107-12-0	0.24	360.0	3600.0
	Propham	122-42-9	0.056	1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8	14.0	N/A	N/A
	2,4,5-T	93-76-5	0.72	7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5	0.000063	0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3	0.000063	0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
E	1346 (WCATS - R4)	D	inted 2/9/2021 10.	51.20.416	Page 8 of 10

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
	Thiodicarb	59669-26-0	0.019	1.4	14.0
	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
	Toluene	108-88-3	0.08	10.0	100.0
	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
	Toxaphene	8001-35-2	0.0095	2.6	26.0
	Triallate	2303-17-5	0.042	1.4	14.0
	Tribromomethane	75-25-2	0.63	15.0	150.0
	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
	Trichloroethylene	79-01-6	0.054	6.0	60.0
	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
	Triethylamine	121-44-8	0.081	1.5	15.0
	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
	Vernolate	1929-77-7	0.042	1.4	14.0
	Vinyl chloride	75-01-4	0.27	6.0	60.0
	Xylene	1330-20-7	0.32	30.0	300.0
	2,4-Xylidine	95-68-1	0.01	0.66	6.6
	Antimony	7440-36-0	1.9	1.15	11.5
	Arsenic	7440-38-2	1.4	5.0	50.0
V	Barium	7440-39-3	1.2	21.0	210.0
	Beryllium	7440-41-7	0.82	1.22	12.2
	Cadmium	7440-43-9	0.69	0.11	1.1
	Chromium	7440-47-3	2.77	0.6	6.0
	Lead	7439-92-1	0.69	0.75	7.5
	Mercury	7439-97-6	0.15	0.025	0.25
	Nickel	7440-02-0	3.98	11.0	110.0
	Selenium	7782-49-2	0.82	5.7	57.0
\square	Silver	7440-22-4	0.43	0.14	1.4
	Thallium	7440-28-0	1.4	0.2	2.0
	Vanadium	7440-62-2	4.3	1.6	16.0
	Zinc	7440-66-6	2.61	4.3	43.0

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 and TA-21) For help in completing this section, call 7-4301.

		1 01	noip in completing	tillo occion, can r 4	501.			
Indicate if waste w	as: 🗆 Accelerator p	produced	☐ Reactor Produc	ed 🗹 Other (de	scribe in WPF Section	1 "Waste/Pi	rocess Descr	iption")
Radionuclide Con	taminants							
Identify for the	Present at or Below		oove LOC in Ci/L	Identify for the	Present at or Below	Range if	above LOC	in Ci/L
following	LOC (in Ci/l)	Min.	Max.	following	LOC (in Ci/l)	Min.		Max.
As-74	□ ≤ 1.0E-07			Rb-84	□ ≤ 5.0E-08			
Be-7	□ ≤ 1.0E-07			Sc-46	□≤ 1.0E-07			
Ce-141	□ ≤ 1.0E-07			Sc-48	□ ≤ 1.0E-07			
Co-56	□ ≤ 1.0E-08			Se-75	□ ≤ 1.0E-07			
Co-57	□ ≤ 1.0E-07			Sn-113	□ ≤ 1.0E-07			
Co-58	□ ≤ 1.0E-07			Sr-85	□ ≤ 1.0E-07			
Co-60	□ ≤ 2.0E-08			Sr-89	□ ≤ 1.0E-07			
Cs-134	☑ ≤ 1.0E-08			Sr-90	□ ≤ 5.0E-09			
Cs-137	☑ ≤ 1.0E-08			V-48	□ ≤ 1.0E-07			
Eu-152	☑ ≤ 1.0E-07			Y-88	□ ≤ 1.0E-07			
H-3	□ ≤ 2.0E-08			Zn-65	□ ≤ 4.0E-08			
I-133	□ ≤ 5.0E-08			Am-241	☑ ≤ 1.0E-07			
Mn-52	□ ≤ 1.0E-07			Pu-238	□ ≤ 1.0E-07			
Mn-54	□ ≤ 1.0E-07			Pu-239	☑ ≤ 1.0E-07			
Na-22	□ ≤ 5.0E-08			U-234	☑ ≤ 1.0E-07			
Ra-226	□ ≤ 2.5E-10			U-235	☑ ≤ 1.0E-09			
Ra-228	□ ≤ 2.5E-10			U-238	☑ ≤ 1.0E-09			
Rb-83	□ ≤ 1.0E-07			Th-232	☑ ≤ 1.0E-10			
Others						•		
Np-237				7				
Other Contaminan	ts			_				
Metal	Present Below LOC	Range if ab	ove LOC in ppm	Additional	Contaminants	Min.	Max.	
Contaminants	(in ppm or mg/L)	Min.	Max.	Chemical Oxygen I	Demand (COD)	0.	0.	mg/L
Aluminum	☑ ≤ 50.0			Total Suspended S	Solids (TSS)	0.	0.	mg/L
Boron	☑ ≤ 50.0			Total Dissolved So	lids (TDS)	0.	0.	mg/L
Cobalt	☑ ≤ 5.0			Perchlorate		0.	0.	mg/L
Copper	☑ ≤ 10.0			Total Toxic Organic	cs (TTO)	0.	0.	mg/L
Vanadium	☑ ≤ 1.0			Nitrogen (Total)		0.	20000.	mg/L
Zinc	☑ ≤ 100			Total Nitrates		0.	20000.	mg/L
	Radioactive Contam	inant Totals			For TA-55 Us	o Only		
т.	tal Alpha	0.00 Ci/L		Magtawatar will b	e discharged through	•	llowing:	
	otal Beta			□ Acid Line	© Caustic Line*		ustrial Waste	Lina
		0.00 Ci/L				□ Indi	usinai vvasie	Line
Ic	tal Gamma	0.00 Ci/L	•	* pH must be gre	ater than 8.0			
Ob a main all Trea e tree e	mt for Dellars Mater Ob	:11	☐ Yes	Tunar	Volume:			
	nt for Boilers/Water Ch	illers:		71 -				
Industrial Cleaner:		ouros (include	☐ Yes ☑ No	,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	Volume:			
-	me when discharge oc					2.00 L/		
· · · · · · · · · · · · · · · · · · ·	lume when discharge o	· · · · · · · · · · · · · · · · · · ·	<u>.</u>	us rinse water volum	(e)	3.00 L/		
	of days per year disch					300 da	<u> </u>	
Estimated total vol	ume per year discharge	ed to the Radi	ioactive Liquid Was	ste Collection System	n at TA-50/TA-21: (s	ee estimate	on page 1)	



WASTE PROFILE FORM COVER SHEET

46579 APPROVED

V	Vaste	Charac	terization	Inform	ation
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Waste Stream ID:	46579
WPF ID (Legacy):	
Waste Stream Name:	ANALYTICAL INSTRUMENTS, CONSISTS OF INSTRUMENT RINSE AND EXCESS SAMPLE
Expiration Date:	03/17/2022
Waste Type:	Mixed Low Level Waste for the Radioactive Liquid Waste Treatment Facility (RLWTF)
Radiological Type:	Low Level Waste
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	ACIDIC
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	<u>W105</u>
	Inorganic Liquids: Acidic aqueous wastes less than 5% acid (diluted but pH <2)
EPA Source Code:	<u>G09</u>
	Wastes from Ongoing Production and Service Processes: Other production or service-related processes from which the waste is a direct outflow or result (specify in comments)

Waste Generation Estimates

YEAR	VOLUME
2021	750.00 L
2020	750.00 L
2019	750.00 L



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
46579	

Generator's Z Number	Waste Generator's Name	e (<i>print)</i> WM	/IC's Z Nur	mber	WMC's Name (pr	rint)	Generator's Phone
214187	REARICK, MICH	4EL	2412	267	MAHONEY	', PATRICK	5056671224
Generator's Mail Stop	Waste Generating Group	Waste Str	eam Techi	nical Area	Building	Room	WMC Phone
G740	CAAC		03		000029		5056675498
Waste Accumulation (che	eck only one)	'			□ Central Accur	nulation Area Site	No:
☐ Satellite Accumulation /	Area Site	e No:			☐ NM Special W		No:
☐ Less-than-90 Days Stor	rage Area Site	e No:			☑ None of the A	bove Site	: No:
□TSDF	Site	e No:			☐ PCBs Storage	e Area Site	e No:
☐ Universal Waste Storag		No:			☐ Rad Staging A	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site	e No:			☐ Rad Storage /	Area Sile	• No:
☐ ER Site	SWM11/AO	C No					
Method of Characterization							
	`	• • • •	Con	mala Na.			
☐ Chemical/Physical Ana ☐ Radiological Analysis		Attached Attached		nple No: nple No:			
☐ PCB Analysis		Attached		nple No:			
☑ Acceptable Knowledge	Documentation ☑ A	Attached [C 132, ANC 191, AN	C 211, AN	
☐ Material Safety Data SI	heet (MSDS) $\Box A$	Attached					
Section 1 - Waste Prevent	ion/Minimization (answe	er all questions)					
Can hazard segregation, e	elimination, or material su	bstitution be use	ed?		Yes (provide com	nments) 🗹 N	No
Can any of the materials in	n the waste stream be red	ycled or reused	?		Yes (provide com	nments) 🗹 N	No
Has waste minimization be	een incorporated into prod	cedures or other	process o	controls?	Yes		No (provide comments)
Can this waste be generat	ed outside a RCA?				Yes (provide com	nments) 🗹 N	No □ N/A
Comments:							
Section 2 - Chemical and	Physical Information						
Waste Type (check only o		(check all that a	annly)	Waste Sour	ce (check only on	e) Waste N	Matrix (check only one)
☐ Unused/Unspent Chem		(orroon an inat o		Waste Sour		Gas	matrix (orrook orny orro)
☑ Process Waste/Spent	□ Organic			☐ Decon		□≤1.5	Atmospheres Pressure
Chemical/Other .	☐ Solvent (see				Processing/Prod		Atmospheres Pressure
Radiological Information	□ Degreaser (s	ee instructions)		_	h/Development/Te	esting 📗 🗆 Liquit	
_	l —	•		Cobodul	•		fied Compressed Gas
_			Was Waste generated in a RCA? ☐ Electroplating ☐ ☐				
□ Non-radioactive	☑ Yes ☐ No ☐ Treated Hazardous Waste or Residue					Liquid ☑ Aque	·
☑ Radioactive - Low Leve	☐ No-Longer Co		Residue	☐ Houseke	ed Maintenance eping - Routine anup - Routine g - Routine Monito	☑ Aque	·
	☐ Explosive Pro	ontained-In ocess	Residue	☐ Houseke	ed Maintenance eping - Routine anup - Routine g - Routine Monito	ring ☐ Non-	eous
☐ Radioactive - Transurar	☐ Explosive Pro☐ Infectious/Me	ontained-In ocess	Residue	☐ Houseke ☐ Spill Clea ☐ Sampling	ed Maintenance eping - Routine anup - Routine g - Routine Monito	ring ☐ Aque ☐ Non- ☐ Susp ☐ Susp	eous Aqueous ended Solids/Aqueous ended Solids/Non-
	□ Explosive Pro □ Infectious/Me □ Biological	ontained-In ocess		☐ Houseke ☐ Spill Clea ☐ Sampling ☐ Other (de	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe)	ring	eous Aqueous ended Solids/Aqueous ended Solids/Non-
Waste Destination (check	□ Explosive Pro □ Infectious/Me □ Biological □ Beryllium	ontained-In ocess dical		☐ Houseke ☐ Spill Clea ☐ Sampling ☐ Other (do	ed Maintenance eping - Routine anup - Routine g - Routine g - Routine Monito escribe)	ring ☐ Aque ☐ Susp ☐ Susp Aque Solid	eous Aqueous eended Solids/Aqueous eended Solids/Non- eous
Waste Destination (check	□ Explosive Pro □ Infectious/Me □ Biological	ontained-In ocess dical iner (see instruc		☐ Houseke ☐ Spill Clea ☐ Sampling ☐ Other (do Waste Sour ☐ Abateme	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent	✓ Aque Susp Susp Aque Solid Powo	eous Aqueous Pended Solids/Aqueous Pended Solids/Non- Peous der/Ash/Dust
Waste Destination (check ☐ SWWS ☑ RLWTF	□ Explosive Pro □ Infectious/Me □ Biological □ Beryllium □ Empty Contai □ Battery (see i Asbestos	ontained-In ocess dical iner (see instruc		☐ Houseke ☐ Spill Clea ☐ Sampling ☐ Other (do Waste Sour ☐ Abateme	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades	ring □ Aque □ Non- □ Susp □ Susp Aque Solid □ Powo □ Solid	eous Aqueous Aqueous bended Solids/Aqueous bended Solids/Non- beous der/Ash/Dust
Waste Destination (check ☐ SWWS ☑ RLWTF ☐ RLWTP	□ Explosive Pro □ Infectious/Me □ Biological □ Beryllium □ Empty Contai □ Battery (see i Asbestos □ Friable	ontained-In ocess dical iner (see instruc		☐ Houseke ☐ Spill Clea ☐ Sampling ☐ Other (de	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades on	ring	eous Aqueous Aqueous bended Solids/Aqueous bended Solids/Non- beous der/Ash/Dust
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE	□ Explosive Pro □ Infectious/Me □ Biological □ Beryllium □ Empty Contai □ Battery (see i Asbestos □ Friable □ Non-Friable	ontained-In ocess dical dical iner (see instruc nstructions)		Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construct Demolitie Decon/D	ed Maintenance seping - Routine anup - Routine g - Routine Monito escribe) ce B ent ction/Upgrades on ecom ative Derived	✓ Aque ring ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Slud ☐ Abso	eous Aqueous Pended Solids/Aqueous Pended Solids/Non- Peous der/Ash/Dust ge prbed/Solidified Liquid
Waste Destination (check ☐ SWWS ☑ RLWTF ☐ RLWTP	□ Explosive Pro □ Infectious/Me □ Biological □ Beryllium □ Empty Contai □ Battery (see i Asbestos □ Friable □ Non-Friable PCB Source Co	ontained-In ocess dical iner (see instruc nstructions) oncentration		Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construct Demolitic Decon/D Investiga Orphan/I	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent ction/Upgrades on ecom ative Derived Legacy	ring □ Aque □ Non- □ Susp □ Susp Aque Solid □ Powo □ Solid □ Sludo □ Abso □ Debr	eous Aqueous eended Solids/Aqueous eended Solids/Non- eous der/Ash/Dust ge prbed/Solidified Liquid is
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information	Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source College PCB < 50 ppi PCB >= 50 -	ontained-In ocess dical iner (see instruc nstructions) oncentration m < 500 ppm		Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construc Demolitic Decon/D Investiga Orphan/I Remedia	ed Maintenance seping - Routine anup - Routine g - Routine Monito escribe) ce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration	ring	der/Ash/Dust ge group (check only one)
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	Explosive Prolinic Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB < 50 ppi PCB >= 50 - PCB >= 500	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm opm	tions)	Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construc Demolitic Decon/D Investiga Orphan/I Remedia Repackii	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent ction/Upgrades on ecom ative Derived Legacy	ring	der/Ash/Dust ge bribed/Solidified Liquid is Type (check only one) oous
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information	Explosive Prolinic Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB < 50 ppi PCB >= 50 - PCB >= 500 Hazardous W	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm opm //aste Contamina	tions)	Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construct Demolitic Decon/D Investiga Orphan/I Remedia Repackii Unscheel Houseke	ed Maintenance seping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades on ecom ative Derived Legacy ation/Restoration ng (secondary) luled Maintenance eping (non-routine	☑ Aque ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Sludo ☐ Abso ☐ Debr Matrix T ☑ Home ☐ Hetel	der/Ash/Dust ge group (check only one)
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB > 50 prolining PCB >= 50 prolining Hazardous Well Untreated Ha	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm oppm faste Contamina zardous Debris	tions)	Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construc Demolitic Decon/D Investiga Orphan/I Remedia Repackin Unschee Houseke	ed Maintenance seping - Routine anup - Routine g - Routine Monito escribe) ce B ent ction/Upgrades on eccom ative Derived Legacy ation/Restoration ng (secondary) luled Maintenance eping (non-routine)	☑ Aque ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Sludo ☐ Abso ☐ Debr Matrix T ☑ Home ☐ Hetel	der/Ash/Dust ge bribed/Solidified Liquid is Type (check only one) oous
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	Explosive Prolinic Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB < 50 ppi PCB >= 50 - PCB >= 500 Hazardous W	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm opm daste Contamination Debris Solid Waste	tions)	☐ Houseke ☐ Spill Clei ☐ Sampling ☐ Other (de Waste Sour ☐ Abateme ☐ Construc ☐ Decon/D ☐ Investiga ☐ Orphan/I ☐ Remedia ☐ Repackir ☐ Unsched ☐ Houseke ☐ Spill Clei ☐ Non-Peti	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades on ecom ative Derived Legacy ation/Restoration ng (secondary) luled Maintenance eping (non-routine) anup (non-routine) roleum Tanks	☑ Aque ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Sludo ☐ Abso ☐ Debr Matrix T ☑ Home ☐ Hetel	der/Ash/Dust ge bribed/Solidified Liquid is Type (check only one) ogeneous
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB > 50 prolining PCB >= 50 prolining PCB >= 50 prolining PCB >= 500 prolining	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm opm daste Contamination Debris Solid Waste	tions)	Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construc Demolitic Decon/D Investiga Orphan/I Remedia Repackin Unschee Houseke	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades on ecom ative Derived Legacy ation/Restoration ing (secondary) luled Maintenance eping (non-routine) roleum Tanks m Tanks	☑ Aque ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Sludg ☐ Abso ☐ Debr Matrix T ☑ Home ☐ Heter	eous Aqueous Aqueous bended Solids/Aqueous bended Solids/Non- bous der/Ash/Dust ge brbed/Solidified Liquid is Type (check only one) ogeneous rogeneous
Waste Destination (check □ SWWS ☑ RLWTF □ RLWTP □ TA-16/HE □ NTS Classified Information ☑ Unclassified	Explosive Prolinic Explosive Prolinic Infectious/Me Biological Beryllium Empty Contai Battery (see i Asbestos Friable Non-Friable PCB Source Co PCB > 50 prolining PCB >= 50 prolining PCB >= 50 prolining PCB >= 500 prolining	ontained-In ocess dical iner (see instructions) oncentration m < 500 ppm opm daste Contamination Debris Solid Waste	tions)	Houseke Spill Clea Sampling Other (de Waste Sour Abateme Construct Decon/D Investiga Orphan/I Remedia Repackii Unsched Houseke Spill Clea	ed Maintenance eping - Routine anup - Routine g - Routine Monito escribe) ce B ent etion/Upgrades on ecom ative Derived Legacy ation/Restoration ing (secondary) luled Maintenance eping (non-routine) roleum Tanks m Tanks	☑ Aque ☐ Non ☐ Susp ☐ Susp Aque Solid ☐ Powo ☐ Solid ☐ Sludg ☐ Abso ☐ Debr Matrix T ☑ Home ☐ Heter	der/Ash/Dust ge bribed/Solidified Liquid is Type (check only one) oous

Section 3 - Process and Waste Des	cription						
Process Description: AQUEOUS ACID WASTE GENERAT		M ANALY	TICAL II	NSTRUMEN	NTS. CONSISTS OF INSTRI	UMENT RINSE AN	D EXCESS SAMPLE.
Waste Description: This waste consists of laboratory glas	ssware rir	nsate and	excess s	samples res	sulting from operations condu	ucted at CMR.	
Section 4 - Characteristics							
Ignitability (check only one)	Corroci	vity (ched	sk only o	ne) (nU)	Reactivity (check as many	as anniv) Roiling	Point (check only one)
□ < 73 F (< 22.8 C)	Ø <= 2.	• (ok Offig Of	<i>ie)</i> (pi i)	RCRA Unstable		5 F (<= 35 C)
□ 73 - 99 F (22.8 - 37.2 C)	□ 1- 2.1 □ 2.1				☐ Water Reactive		F (> 35 C)
□ 100 - 139 F (37.8 - 59.4 C)					☐ Cyanide Bearing		Applicable
□ 140 - 200 F (60.0 - 99.3 C)	□6.1 -				☐ Sulfide Bearing		
□ > 200 (> 99.3 C)	□9.1 -	12.4			☐ Pyrophoric		
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive		
□ DOT Flammable Gas		d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT	Div.]	
□ DOT Oxidizer	⊔ Non-a	aqueous			✓ Non-Reactive		
☑ Not Ignitable							
	С	haracteriz	ation Met	hod	Concentration of Co	ntaminants	
				None or	Contaminant pre	esent at	Do mulata ma Limit
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxi (10,000 ppm =	umum - 104 \	Regulatory Limit
Toxicity Characteristic Metals Arsenic	$\overline{\mathbf{A}}$				0.01 to	0.5 ppm	5.0 ppm
Barium	Ø				0.01 to	10 ppm	100.0 ppm
Cadmium	<u> </u>				0.01 to	0.1 ppm	1.0 ppm
Chromium	Ø				0.01 to	0.5 ppm	5.0 ppm
Lead	☑				0.01 to	0.5 ppm	5.0 ppm
Mercury	Ø				0.01 to	0.02 ppm	0.2 ppm
Selenium	<u> </u>				0.01 to	0.1 ppm	1.0 ppm
Silver Toxicity Characteristic Organics	<u> </u>	ш	Ш		0.01 to	0.5 ppm	5.0 ppm
Benzene	V			\square	to	ppm	0.5 ppm
Carbon tetrachloride	<u> </u>			<u> </u>	to	ppm	0.5 ppm
Chlorobenzene	Ø			\square	to	ppm	100.0 ppm
Chloroform	☑			☑	to	ppm	6.0 ppm
Cresol	<u> </u>			☑	to	ppm	200.0 ppm
p-Cresol	<u> </u>			<u> </u>	to to	ppm	200.0 ppm
m-Cresol o-Cresol	<u> </u>				to	ppm ppm	200.0 ppm 200.0 ppm
1,4-Dichlorobenzene	<u>a</u>			Ø	to	ppm	7.5 ppm
1,2-Dichloroethane	<u> </u>			✓	to	ppm	0.5 ppm
1,1-Dichloroethylene	V			Ø	to	ppm	0.7 ppm
2,4-Dinitrotoluene	☑			☑	to	ppm	0.13 ppm
Hexachlorobenzene	Ø			Ø	to	ppm	0.13 ppm
Hexachlorobutadiene	<u> </u>		무	<u> </u>	to to	ppm	0.5 ppm
Hexachloroethane Methyl ethyl ketone	<u> </u>				to	ppm ppm	3.0 ppm 200.0 ppm
Nitrobenzene	Ø			<u> </u>	to	ppm	2.0 ppm
Pentachlorophenol	<u> </u>			Ø	to	ppm	100.0 ppm
Pyridine	V			Ø	to	ppm	5.0 ppm
Tetrachloroethylene	☑			☑	to	ppm	0.7 ppm
Trichloroethylene	Ø				to	ppm	0.5 ppm
2,4,6-Trichlorophenol	<u> </u>		무	<u> </u>	to to	ppm	2.0 ppm
2,4,5-Trichlorophenol Vinvl chloride	<u> </u>			<u> </u>	to	ppm ppm	400.0 ppm 0.2 ppm
Herbicides and Pesticides	ے ا			ك ر	1	ρριιι	υ.Ζ γριτι
Chlordane	V			\square	to	ppm	0.03 ppm
2,4-D	V			$\overline{\square}$	to	ppm	10.0 ppm
Endrin	\square			☑	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø		무		to	ppm	0.008 ppm
Lindane (gamma-BHC) Methoxychlor	<u> </u>			<u> </u>	to to	ppm ppm	0.4 ppm 10.0 ppm
2,4,5-TP (Silvex)	<u> </u>	-		<u> </u>	to	ppm	1.0 ppm
Toxaphene	Ø			Ø	to	ppm	0.5 ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppm)	Maximum (ppm)
	WATER	950000 to	1000000
	HNO3[NITRIC ACID]	0 to	20000
	Total of may represe of this section and name 2		400.00 in 9/
	Total of max. ranges of this section and page 2 Additional Information		102.00 in %
If additional informati	on is available on the chemical, physical, or radiological character of the waste not covered	on this form provid	le it helow
	Profile replaces WSP 38495. The process and waste stream remain the same, however ad		
	and strengthen characterization. Metals concentrations in the Toxicity Chatracteristics par		
	ns of these metals used as instrument calibration standards.	ioi aro bacca cir are	71010111
•			
This waste stream is	chemically compatible with the RLWTF waste collection and treatment system.		
MARTE STDEAM IS	GENERATED DURING THE ANALYSIS OF PU PROCESSING SAMPLES FROM TA55.	ALL CAMPLECTIN	DEBCO
	FION WHICH DESTROYS ORGANICS. ALL WASTE IS IN SOLUTION, 0-2% HNO3. RCR.		
	LATORY LIMITS DUE TO THE DILUTION INHERENT IN THE ANALYTICAL PROCESS.		
ICPAES, ICPMS, XF	RF AND CVAF INSTRUMENTS OPERATED UNDER C-AAC ANALYTICAL PROCEDURES	S.	
A 44 l - - - - - - -	mafarana sina NADE# 22502 ia aura araadad bu NACD# 40570		
Allached documents	referencing WPF# 33593, is superceded by WSP# 46579.		
The attached docum	ent "Comments on WPF 38495" and the is relevant to this profile as part of the AK regardi	ng the determinatio	n for RCRA
	entration, and the determination of COD, TSS, TDS Perchlorate and nitrogen concentration		
Section 6 - Work Co	ntrol Documentation		
Do the procedures for	or this process cover how to manage this waste?	mments)	
waste to/from contai	or this process address controls to prevent changes to waste constituents and concentration ners? ☑ Yes ☐ No (provide comments)	ns or addition or rer	noval of
Comments:			
Comments.			
Section 7 - Packagin	g and Storage Control		
	<u> </u>		
<u> </u>	ste will be packaged in according to the applicable WAC.		
Describe how the wa	into the PLWCS		
<u> </u>	into the RLWCS.		
Describe how the wa Solution disposed of			
Describe how the was Solution disposed of Identify the storage r	nanagement controls that will be used for this waste stream: (check all that apply)	er (describe) CMR	Controlled Assess

Section 8 - Waste Certification Statements ☐ Waste appears to meet WAC attachment for: MLLW-RLWTF Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: MICHAEL REARICK (214187) Date: 03/18/19 02:46 PM Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Date: Signature: STEVE TORREZ (117028) 03/19/19 06:55 AM RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Signature: ROBERT MOLTER (239137) Date: 03/19/19 07:50 AM RLWTF Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and

accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of

the applicable WAC.

Signature: JOHN DEL SIGNORE (113532)

Date: 03/19/19 08:59 AM

		A 44.	achimout 4 I DD	and IIIIO			
Idon	tify category and presence of any constituents		achment 4 - LDR				
	llify category and presence of any constituents -Wastewater/Wastewater Category <i>(check o</i>		(equal to or above	e iimit).			
	Non Wastewater ☑ Wastewater [as de	• ,	CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1		
Noti	fications and Certifications - Check the app	oilcable boxe	es				
Generator Requirements: ☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards ☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45 treatment standards ☐ Hazardous wastes (except soil) meeting treatment standards at point of generation ☐ Hazardous wastes contaminated soil meeting treatment standards at point of generation ☐ Sign ☐ TSDF or Generator Treatment:							
_	TSDF treated hazardous debris meeting the a	Iternative trea	atment standards	of 40 CFR 268 45	Sign Certification #5		
	Generator treated hazardous debris meeting t				Sign Certification #6		
_	Hazardous wastes contaminated soil treated to				Sign Certification #7		
_	Wastes or residues from characteristic hazard				Sign Certification #8		
	Wastes or residues from characteristic hazard Other TSDF wastes meeting the more stringer				Sign Certification #9 Sign Certification #10		
	Other generator wastes meeting the more stringer				Sign Certification #10		
				ardous Constituents	9		
	(Check the applicable underlying cons	tituents abov	e the concentration	on levels for D001 through D043 ch	aracterstic wastes only)		
	No Underlying Hazardous Constituents in the	nis waste str					
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS		
			Ctondord /ma/l \	(mar/leg unlage noted otherwise)	, ,, , , , , , , , , , , , , , , , , , ,		
	Organic Constituents				(mg/kg unless noted otherwise)		
	Acenaphthene	83-32-9	0.059	3.4	(mg/kg unless noted otherwise) 34.0		
	Acenaphthene Acenaphthylene	83-32-9 208-96-8	0.059 0.059	3.4 3.4	(mg/kg unless noted otherwise) 34.0 34.0		
	Acenaphthene Acenaphthylene Acetone	83-32-9 208-96-8 67-64-1	0.059 0.059 0.28	3.4 3.4 160.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0		
	Acenaphthene Acetone Acetonitrile	83-32-9 208-96-8 67-64-1 75-05-8	0.059 0.059 0.28 5.6	3.4 3.4 160.0 38.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0		
	Acenaphthene Acetone Acetonitrile Acetophenone	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2	0.059 0.059 0.28 5.6 0.01	3.4 3.4 160.0 38.0 9.7	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3	0.059 0.059 0.28 5.6 0.01 0.059	3.4 3.4 160.0 38.0 9.7 140.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8	0.059 0.059 0.28 5.6 0.01 0.059	3.4 3.4 160.0 38.0 9.7 140.0 N/A	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylonitrile	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A		
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6		
	Acenaphthene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrylamide Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite alpha-BHC	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8 319-84-6	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36 0.00014	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A 0.066	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A 0.66		
	Acenaphthene Acenaphthylene Acetone Acetonitrile Acetophenone 2-Acetylaminofluorene Acrolein Acrylamide Acrylamide Acrylonitrile Aldicarb sulfone Aldrin 4-Aminobiphenyl Aniline o-Anisidine Anthracene Aramite alpha-BHC beta-BHC	83-32-9 208-96-8 67-64-1 75-05-8 98-86-2 53-96-3 107-02-8 79-06-1 107-13-1 1646-88-4 309-00-2 92-67-1 62-53-3 90-04-0 120-12-7 140-57-8 319-84-6 319-85-7	0.059 0.059 0.28 5.6 0.01 0.059 0.29 19.0 0.24 0.056 0.021 0.13 0.81 0.01 0.059 0.36 0.00014	3.4 3.4 160.0 38.0 9.7 140.0 N/A 23.0 84.0 0.28 0.066 N/A 14.0 0.66 3.4 N/A 0.066 0.066	(mg/kg unless noted otherwise) 34.0 34.0 1600.0 380.0 97.0 1400.0 N/A 230.0 840.0 2.8 0.66 N/A 140.0 6.6 34.0 N/A 0.66 0.66		

Butylate

Carbaryl

Benomyl

☐ Benzal chloride

Benzene

Benz[a]anthracene

☐ Benzo(b)fluoranthene

Benzo[ghi]perylene

Benzo[k]fluoranthene

Bis(2-chloroethyl) ether

Bromodichloromethane

Butyl benzyl phthalate

Bromomethane

n-Butyl alchohol

Bis(2-Chloroethoxy)methane

Bis(2-chloroisopropyl) ether

4-Bromophenyl phenyl ether

Bis(2-ethylhexyl) phthalate

Benzo[a]pyrene

1.4

3.4

6.0

10.0

6.8

3.4

1.8

6.8

7.2

6.0

7.2

28.0

15.0

15.0

15.0

2.6

28.0

1.4

0.14

14.0

34.0

60.0

100.0

68.0

34.0

18.0

68.0

72.0

60.0

72.0

280.0

150.0

150.0

150.0

26.0

280.0

14.0

1.4

17804-35-2

56-55-3

98-87-3

71-43-2

205-99-2

50-32-8

191-24-2

207-08-9

111-91-1

111-44-4

117-81-7

75-27-4

74-83-9

101-55-3

71-36-3

85-68-7

63-25-2

2008-41-5

39638-32-9

0.056

0.059

0.055

0.14

0.11

0.061

0.0055

0.11

0.036

0.033

0.055

0.28

0.35

0.11

0.055

5.6

0.017

0.042

0.006

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard) (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8	0.044	5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4	0.77	5.6	56.0
	o-Cresol	95-48-7	0.11	5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1		6.0	60.0
	o-Dichlorobenzene	95-50-1		6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
ö	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
_	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin Diethyl phthelete	60-57-1		0.13	1.3 280.0
Form	Diethyl phthalate	84-66-2	U.Z	28.0	280.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3	0.047	28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
Disulfoton	298-04-4	0.017	6.2	62.0
Dithiocarbamates (total)	WCATS-001	0.028	28.0	280.0
EPTC	759-94-4	0.042	1.4	14.0
Endosulfan I	959-98-8	0.023	0.066	0.66
Endosulfan II	33213-65-9	0.029	0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8	0.0028	0.13	1.3
Endrin aldehyde	7421-93-4	0.025	0.13	1.3
Ethyl acetate	141-78-6	0.34	33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7	0.12	160.0	1600.0
Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
Ethylene oxide	75-21-8	0.12	N/A	N/A
Famphur	52-85-7	0.017	15.0	150.0
Fluoranthene	206-44-0	0.068	3.4	34.0
Fluorene	86-73-7	0.059	3.4	34.0
Fluoride	16984-48-8	35.0	N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	0.000035	0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
Hexachlorobenzene	118-74-1	0.055	10.0	100.0
Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
Hexachlorocyclopentadiene	77-47-4	0.057	2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7	0.035	30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063	0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
lodomethane	74-88-4		65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.021	2.6	26.0
Kepone	143-50-0		0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5		1.5	15.0
Methiocarb	2032-65-7	0.056	1.4	14.0
Methomyl	16752-77-5	0.038	0.14	1.4
Methoxychlor	72-43-5		0.14	1.4
-	78-93-3		36.0	
Methyl ethyl ketone Methyl isobutyl ketone	108-10-1	0.28	33.0	360.0
Methyl methacrylate	80-62-6		160.0	330.0 1600.0
 1346 (WCATS - RA)	00-02-0	0.14		1000.0

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Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8		28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6		28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5		13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2		1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8		4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8		5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0		28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham Propoxur	122-42-9 114-26-1	0.056 0.056	1.4 1.4	14.0
Prosulfocarb	52888-80-9	0.056	1.4	14.0
			8.2	14.0
Pyrene	129-00-0	0.067		82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex) 1346 (WCATS - R4)	93-72-1	0.72 inted 2/9/2021 10:	7.9	79.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
	Tetrachloroethylene	127-18-4	0.056	6.0	60.0
	2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
	Thiodicarb	59669-26-0	0.019	1.4	14.0
	Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
	Toluene	108-88-3	0.08	10.0	100.0
	Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
	Toxaphene	8001-35-2	0.0095	2.6	26.0
	Triallate	2303-17-5	0.042	1.4	14.0
	Tribromomethane	75-25-2	0.63	15.0	150.0
	2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
	1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
	1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
	1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
	1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
	Trichloroethylene	79-01-6	0.054	6.0	60.0
	Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
	2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
	2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
	1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
	Triethylamine	121-44-8	0.081	1.5	15.0
	Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
	Vernolate	1929-77-7	0.042	1.4	14.0
	Vinyl chloride	75-01-4	0.27	6.0	60.0
	Xylene	1330-20-7	0.32	30.0	300.0
	2,4-Xylidine	95-68-1	0.01	0.66	6.6
	Antimony	7440-36-0	1.9	1.15	11.5
	Arsenic	7440-38-2	1.4	5.0	50.0
$\overline{\mathbf{Q}}$	Barium	7440-39-3	1.2	21.0	210.0
	Beryllium	7440-41-7	0.82	1.22	12.2
	Cadmium	7440-43-9	0.69	0.11	1.1
	Chromium	7440-47-3	2.77	0.6	6.0
	Lead	7439-92-1	0.69	0.75	7.5
	Mercury	7439-97-6	0.15	0.025	0.25
	Nickel	7440-02-0	3.98	11.0	110.0
	Selenium	7782-49-2	0.82	5.7	57.0
☑	Silver	7440-22-4	0.43	0.14	1.4
	Thallium	7440-28-0	1.4	0.2	2.0
	Vanadium	7440-62-2	4.3	1.6	16.0
	Zinc	7440-66-6	2.61	4.3	43.0

Attachment 2 - Wastewater Characteristics for RLWTF (TA-50 and TA-21)

		For	neip in comp	pleting tr	his section, call 7-43	301.			
Indicate if waste w	as: 🗆 Accelerator	produced	☐ Reactor F	Produce	d ☑ Other (de	scribe in WPF Section	1 "Waste/F	Process Descr	iption")
Radionuclide Con	taminants								
Identify for the following	Present at or Below LOC (in Ci/I)	Range if at Min.	oove LOC in M	ı Ci/L ax.	Identify for the following	Present at or Below LOC (in Ci/l)	Range i Min.	f above LOC	in Ci/L Max.
As-74	□ ≤ 1.0E-07				Rb-84	□ ≤ 5.0E-08			
Be-7	□ ≤ 1.0E-07				Sc-46	□ ≤ 1.0E-07			
Ce-141	□ ≤ 1.0E-07				Sc-48	□≤1.0E-07			
Co-56	□ ≤ 1.0E-08				Se-75	□≤1.0E-07			
Co-57	□ ≤ 1.0E-07				Sn-113	□≤1.0E-07			
Co-58	□ ≤ 1.0E-07				Sr-85	□≤1.0E-07			
Co-60	□ ≤ 2.0E-08				Sr-89	□≤1.0E-07			
Cs-134	☑ ≤ 1.0E-08				Sr-90	□ ≤ 5.0E-09			
Cs-137	☑ ≤ 1.0E-08				V-48	□≤1.0E-07			
Eu-152	☑ ≤ 1.0E-07				Y-88	□≤1.0E-07			
H-3	□ ≤ 2.0E-08				Zn-65	□ ≤ 4.0E-08			
I-133	□ ≤ 5.0E-08				Am-241	☑ ≤ 1.0E-07			
Mn-52	□ ≤ 1.0E-07				Pu-238	□≤1.0E-07			
Mn-54	□ ≤ 1.0E-07				Pu-239	☑ ≤ 1.0E-07			
Na-22	□ ≤ 5.0E-08				U-234	☑ ≤ 1.0E-07			
Ra-226	□ ≤ 2.5E-10				U-235	☑ ≤ 1.0E-09			
Ra-228	□ ≤ 2.5E-10				U-238	☑ ≤ 1.0E-09			
Rb-83	□ ≤ 1.0E-07				Th-232	□≤ 1.0E-10			
Other Contaminan	ts								
Metal	Present Below LOC		ove LOC in			Contaminants	Min.	Max.	
Contaminants	(in ppm or mg/L)	Min.	M	ax.	Chemical Oxygen I		0.	0.	mg/L
Aluminum	□ ≤ 50.0				Total Suspended S		0.	0.	mg/L
Boron	□ ≤ 50.0				Total Dissolved So	lids (TDS)	0.	100.	mg/L
Cobalt	□≤5.0				Perchlorate		0.	0.	mg/L
Copper	□ ≤ 10.0				Total Toxic Organic	cs (TTO)	0.	0.	mg/L
Vanadium	□≤1.0				Nitrogen (Total)				mg/L
Zinc	□ ≤ 100				Total Nitrates		0.	20000.	mg/L
	Radioactive Contam	inant Totals				For TA-55 Us	e Only		
To	tal Alpha	0.00 Ci/L			Wastewater will be discharged through one of the following:				
To	tal Beta	0.00 Ci/L			☐ Acid Line	☐ Caustic Line*	☐ Ind	dustrial Waste	Line
To	otal Gamma	0.00 Ci/L			* pH must be great	ater than 8.0			
Chemical Treatme	nt for Boilers/Water Ch	illers:	□Yes	☑ No	Туре:	Volume:			
Industrial Cleaner:			☐Yes	☑ No	Type:	Volume:			
	me when discharge oc						3.00 L		
Maximum daily vo	lume when discharge o	ccurs : (includ	de waste volu	ume plu	s rinse water volum	e)	6.00 L	/ day	
Estimated number	of days per year disch	arge will occu	r:				250 d	ays	
Estimated total volume per year discharged to the Radioactive Liquid Waste Collection System at TA-50/TA-21: (see estimate on page 1)									

Attachment 5 Acetonitrile Solvent Recovery System Waste Stream Profile 43228



WASTE PROFILE FORM COVER SHEET

43228 APPROVED

Waste Characterization Information							
Waste Stream ID:	43228						
WPF ID (Legacy):							
Waste Stream Name:	SOLVENT RECOVERY UNIT						
Expiration Date:	06/22/2019						
Waste Type:	Hazardous Waste						
Radiological Type:	Non Radioactive						
RCRA Category:	RCRA Solid Hazardous						
Ancillary Types:							
Primary Composition:	Aqueous Solutions						
Composition (other):	WATER/ACETONITRILE						
EPA Codes:	D001 F003						
Waste Acceptance:							
EPA Form Code:	W119						

Inorganic Liquids: Other inorganic liquid (specify in comments)

Other Intermittent Events or Processes: Other one-time or intermittent processes

Waste Generation Estimates

EPA Source Code:

YEAR	VOLUME
2018	1.00 L
2017	1.00 L
2016	1.00 L

(specify in comments)



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
43228	

Generator's Z Number	Waste Generator's Name (p	rint) WMC's Z N	lumber	WMC's Name (pr	Generator's Phone	
120910	SCHMIDT, JURGEN	09	2978	TRUJILL	O, ALICE	
Generator's Mail Stop	Waste Generating Group	Waste Stream Te	chnical Area	Building	Room	WMC Phone
E529	C-DO	35		000085	A119	5056658311
Waste Accumulation (che	ck only one)					
l <u> </u>						No:
☑ Satellite Accumulation A	irea Site No	3795		☐ NM Special W	Vaste Site	No:
Less-than-90 Days Stor	age Area Site No	:		☐ None of the A	bove Site	No:
TSDF	Site No	:		☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag		·		☐ Rad Staging	Area Site	No:
☐ Used Oil for Recycle	Site No	:		☐ Rad Storage	Area Site	No:
ER Use Only						
☐ ER Site	SWMU/AOC N	0				
Method of Characterization	n (check as many as apply)					
☐ Chemical/Physical Anal	ysis □ Attac	hed S	Sample No:			
☐ Radiological Analysis	Attac		Sample No:			
☐ PCB Analysis	☐ Attac		ample No:			
☑ Acceptable Knowledge	Documentation ☑ Attac		ntation No: WS	S ID #43228		
☐ Material Safety Data Sh						
1	,					
	on/Minimization (answer al					
	limination, or material substit			Yes (provide com		
•	the waste stream be recycle			I Yes (provide com		
Has waste minimization be	en incorporated into procedu	res or other proces	s controls? ☑	1 Yes		lo (provide comments)
Can this waste be generate	ed outside a RCA?			Yes (provide com	nments) 🗆 🗅 N	lo ☑ N/A
Comments:						
This is a Solvent Recov	ery Unit, receiving a P2 A	ward for recovering	ng solvents p	reviously manag	ed/disposed of a	as Hazardous Waste.
	as solvents are reclaimed					
is recycled by distillation					, ,	
Section 2 - Chemical and F						
Waste Type (check only or		eck all that apply)	Waste Sou	rce (check only on	e) Waste N	latrix (check only one)
☐ Unused/Unspent Chemi			Waste Sou		Gas	·····, ····,
☑ Process Waste/Spent	☑ Organic		☐ Decon		□<15	Atmospheres Pressure
Chemical/Other	☐ Solvent (see instr	uctions)		s Processing/Prod		Atmospheres Pressure
One mediodici	Degreaser (see in			ch/Development/Te		
Radiological Information	□ Dioxin	istructions)		ed Maintenance		ied Compressed Gas
Was Waste generated in a				eeping - Routine	Liquid	
	☐ Treated Hazardo	ıs Waste or Residu	l —	anup - Routine	ous	
	□ No-Longer Conta			g - Routine Monito		Aqueous
☑ Non-radioactive	☐ Eyplosiyo Proces		☐ Other (d			ended Solids/Aqueous
☐ Radioactive - Low Level	☐ Infectious/Medica		0 (,		ended Solids/Non-
☐ Radioactive - Transurar	ic Biological				Aque	
Wests Destination (sheet)			Waste Sou	rco B		ouo
Waste Destination (check	□ Empty Container	(see instructions)	l —		Solid	
Swws	☐ Battery (see instr		☐ Abateme		☐ Powd	ler/Ash/Dust
│ □ RLWTF	Asbestos	,	☐ Demoliti	ction/Upgrades	☐ Solid	
RLWTP	☐ Friable		☐ Demont		☐ Sludg	је
☐ TA-16/HE	☐ Non-Friable		· -		☐ Abso	rbed/Solidified Liquid
□NTS	PCB Source Conce	entration	☐ Investigation	ative Derived	☐ Debri	•
	□ PCB < 50 ppm			ation/Restoration	Madrica	hanna (alanak ambu ama)
Classified Information	□ PCB >= 50 - < 50	0 ppm		ing (secondary)		ype (check only one)
☑ Unclassified	☐ PCB >= 500 ppm			duled Maintenance	☑ Home	ogeneous
☐ Classified/Sensitive		Contaminated Soi		eeping (non-routing		
			100566		· 1	rogeneous
	☐ Untreated Hazard	lous Debris				rogeneous
			☐ Spill Cle	anup (non-routine		rogeneous
	☐ Untreated Hazard		☐ Spill Cle	anup (non-routine) troleum Tanks		ogeneous
	☐ Untreated Hazard☐ Commercial Solid		☐ Spill Cle ☐ Non-Pet ☐ Petroleu	eanup (non-routine troleum Tanks ım Tanks		
	☐ Untreated Hazard☐ Commercial Solid		☐ Spill Cle	eanup (non-routine troleum Tanks ım Tanks		e Annual Volume (m³):

Section 3 - Process and Waste Description

Process Description:

SOLVENT RECOVERY UNIT CLOSED LOOP PROCESS. RECOVERS:

- TRIFLUOROACETIC ACID
- METHANOL
- TETRAHYDROFURAN
- ACETONITRILE

Methanol is used in a small quantity to dissolve the sample before injection on to the chromotography. Therefore, the F003 RCRA Code does apply.

Waste Description:
PRIMARILY AQUEOUS WASTE COLLECTED IN CONTAINER. MAY CONTAIN RESIDUAL AMOUNTS OF TRIFLUOROACETIC ACID,

METHANOL, THF. ACETONITRILE AND WATER ARE THE MAJOR CONSTITUENTS.

Section 4 - Characteristics

Ignitability (check only one)		vity (che	ck only o	<i>ne)</i> (pH)	Reactivity (check as many as apply)	Boiling F	Point (check only	one)
☑ < 73 F (< 22.8 C)	□<= 2.				☐ RCRA Unstable	□<=95	F (<= 35 C)	
□ 73 - 99 F (22.8 - 37.2 C)	☑ 2.1 -	4.0			☐ Water Reactive	☑ >95 F	(> 35 C)	
□ 100 - 139 F (37.8 - 59.4 C)	□4.1 -				☐ Cyanide Bearing		pplicable	
□ 140 - 200 F (60.0 - 99.3 C)	□6.1 -	9.0			☐ Sulfide Bearing		• •	
□ > 200 (> 99.3 C)	□9.1 -				☐ Pyrophoric			
☐ EPA Ignitable - Non-liquid	□>= 12				☐ Shock Sensitive			
DOT Flammable Gas		d Corrosiv	e to Ste	ام	☐ Explosive [Specify DOT Div.]			
□ DOT Oxidizer	□ Non-	aqueous		01	✓ Non-Reactive			
☐ Not Ignitable	_ INOII-	aqueous			= Non Redouve			
- Not ignitable								
	С	haracteriz	ation Met	thod	Concentration of Contaminant	S		
				None or	Contaminant present at		B	
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory	Limit
Toxicity Characteristic Metals	_				(10,000 ppm = 1%)			
Arsenic	<u> </u>					ppm	5.0	
Barium	☑			✓		ppm	100.0	
Cadmium	☑			✓		ppm	1.0	
Chromium	☑			✓		ppm	5.0	
Lead	☑			✓		ppm	5.0	
Mercury	Ø			\square		ppm	0.2	
Selenium	V			\square		ppm	1.0	
Silver	\checkmark			\square	to	ppm	5.0	ppm
Toxicity Characteristic Organics							1	
Benzene	$\overline{\mathbf{A}}$			\square	to	ppm	0.5	ppm
Carbon tetrachloride	Ø			\square	to	ppm	0.5	ppm
Chlorobenzene	Ø			\square	to	ppm	100.0	ppm
Chloroform	$\overline{\mathbf{Q}}$			\square	to	ppm	6.0	ppm
Cresol	$\overline{\mathbf{Q}}$			\square	to	ppm	200.0	ppm
p-Cresol	V			$\overline{\square}$	to	ppm	200.0	ppm
m-Cresol	$\overline{\mathbf{Q}}$				to	ppm	200.0	ppm
o-Cresol	$\overline{\checkmark}$				to	ppm	200.0	ppm
1,4-Dichlorobenzene	V			$\overline{\square}$	to	ppm	7.5	ppm
1,2-Dichloroethane	V			$\overline{\mathbf{A}}$	to	ppm	0.5	ppm
1,1-Dichloroethylene	Ø			\square	to	ppm	0.7	
2,4-Dinitrotoluene	V			$\overline{\square}$	to	ppm	0.13	
Hexachlorobenzene	V			$\overline{\mathbf{A}}$		ppm	0.13	ppm
Hexachlorobutadiene	Ø					ppm		ppm
Hexachloroethane	Ø			$\overline{\mathbf{A}}$	to	ppm	3.0	ppm
Methyl ethyl ketone	Ø			$\overline{\square}$		ppm	200.0	
Nitrobenzene	Ø			\square	to	ppm	2.0	ppm
Pentachlorophenol	<u> </u>			$\overline{\square}$		ppm		ppm
Pyridine	Ø			$\overline{\square}$		ppm	5.0	• • • • • • • • • • • • • • • • • • • •
Tetrachloroethylene	<u> </u>			<u> </u>		ppm		ppm
Trichloroethylene	<u> </u>			<u> </u>		ppm	0.5	
2.4.6-Trichlorophenol	<u> </u>			<u> </u>		ppm	2.0	
2,4,5-Trichlorophenol	<u> </u>			<u> </u>		ppm	400.0	
Vinyl chloride	<u> </u>	╽╒		<u> </u>	<u> </u>	ppm	0.2	
Herbicides and Pesticides						PP	0.2	PP
Chlordane	V			V	to	ppm	0.03	ppm
2,4-D	Ø			<u> </u>		ppm	10.0	
Endrin	<u> </u>			<u> </u>		ppm	0.02	
Heptachlor (& its epoxide)	<u> </u>			<u> </u>		ppm	0.008	
Lindane (gamma-BHC)	✓ ✓			<u> </u>		ppm	0.008	
Methoxychlor	<u> </u>			$\overline{\square}$		ppm	10.0	
2,4,5-TP (Silvex)	<u> </u>			<u> </u>		ppm	1.0	
Toxaphene	<u>A</u>			<u> </u>		ppm	0.5	
Τολαριίοπο				ب ك		<u> </u>	0.0	L L

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (pp	m)	Maximum (ppm)						
75-05-8	ACETONITRILE	100000		300000						
7732-18-5	WATER	700000	to	900000						
67-56-1	METHANOL TETRALIVERIOR LIBANI	100	to	500						
109-99-9	TETRAHYDROFURAN TRIFLUOROACETIC ACID [76005-1]	100 500	to to	500 1000						
	Total of may ranges of this section and page 2			420 20 in %						
	Total of max. ranges of this section and page 2 Additional Information			120.20 in %						
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form or	ovid	e it helow						
	EN GENERATED SINCE THE IMPLEMENTATION OF THE SOLVENT RECOVERY UNIT		Ovid	C It DOIOW						
IF WASTE IS GENERATED, THE RUN FILES WILL BE SUBMITTED AT TIME OF DISPOSAL. ALL CONSTITUENTS ARE CHEMICALLY COMPATIBLE, NO ADVERSE REACTIONS OR HAZARDS EXPECTED. METHANOL IS USED FOR ITS SOLVENT PURPOSES, THEREFORE F003 DOES APPLY.										
Section 6 - Work Cor	ntrol Documentation									
Do the procedures for	Do the procedures for this process cover how to manage this waste? ☐ Yes ☐ No (provide comments)									
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentration ners? ☑ Yes ☐ No (provide comments)	ns or addition o	rem	noval of						
Comments:										
Section 7 - Packagin	g and Storage Control									
Describe how the waste will be packaged in according to the applicable WAC. Waste will be packaged in accordance with P930-1.										
	nanagement controls that will be used for this waste stream: <i>(check all that apply)</i> Devices □ Limited use locks with log-in for waste ☑ Locked cabinet or building □ Other	er (describe)								

Section 8 - Waste Certification Statements ☑ Waste appears to meet WAC attachment for: HAZ □ Waste stream needs exception/exemption for treatment, storage, or disposal. ☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.) Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations. Signature: ALICE TRUJILLO (092978) Date: 06/22/16 03:32 PM Waste Management Approval: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC. Signature: ALICE TRUJILLO (092978) Date: 06/22/16 03:32 PM

RCRA Review: I have reviewed this form and any associated attachments and the characterization information provided appears to be complete and accurate. I certify, to the best of my knowledge, that the waste characterization information provided by the waste generator meets the requirements of the applicable WAC.

Signature: ANDY ELICIO (118692) Date: 06/22/16 03:40 PM

Attachment 4 - LDR and UHC

Attachment 4 - LDIX and OHO								
Identify category and presence of any constituents listed b	dentify category and presence of any constituents listed below (equal to or above limit).							
Non-Wastewater/Wastewater Category (check only one)							
☑ Non Wastewater ☐ Wastewater [as defined b	y 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1					
Notifications and Certifications - Check the applicable	boxes							
Generator Requirements:								
☐ This shipment contains hazardous waste contaminate	d soil that does not meet tre	atment standards	Sign Certification #2					
☐ This shipment contains untreated hazardous debris to	be treated to 40 CFR 268.4	5 treatment standards	(No certification)					
☐ Hazardous wastes (except soil) meeting treatment sta	ndards at point of generatio	n	Sign Certification #3					
☐ Hazardous wastes contaminated soil meeting treatment	nt standards at point of gen	eration	Sign Certification #4					
TSDF or Generator Treatment:								
☐ TSDF treated hazardous debris meeting the alternative	e treatment standards of 40) CFR 268.45	Sign Certification #5					
☐ Generator treated hazardous debris meeting the alter			Sign Certification #6					
☐ Hazardous wastes contaminated soil treated to 40 CF	R 268.49		Sign Certification #7					
☐ Wastes or residues from characteristic hazardous was	ste treatment meeting treatr	ment standards and UTS	Sign Certification #8					
☐ Wastes or residues from characteristic hazardous was	ste treatment not meeting U	TS	Sign Certification #9					
☐ Other TSDF wastes meeting the more stringent 40 CF	R 268.40 treatment standa	rds to be land disposed	Sign Certification #10					
☐ Other generator wastes meeting the more stringent 40	CFR 268.40 treatment sta	ndards to be land disposed	Sign Certification #11					
Notificati	on of Underlying Hazardo	ous Constituents						

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

☑ /	No Underlying Hazardous Constituents in t	his waste st			
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
_	Organic Constituents	CASRN			(mg/kg unless noted otherwise)
	Acenaphthene	83-32-9		3.4	34.0
_	Acenaphthylene	208-96-8		3.4	34.0
	Acetone	67-64-1		160.0	1600.0
	Acetonitrile	75-05-8		38.0	380.0
	Acetophenone	98-86-2		9.7	97.0
	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0
	Acrolein	107-02-8	0.29	N/A	N/A
	Acrylamide	79-06-1	19.0	23.0	230.0
	Acrylonitrile	107-13-1	0.24	84.0	840.0
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
	Aldrin	309-00-2	0.021	0.066	0.66
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
	Aniline	62-53-3	0.81	14.0	140.0
	o-Anisidine	90-04-0	0.01	0.66	6.6
	Anthracene	120-12-7	0.059	3.4	34.0
	Aramite	140-57-8	0.36	N/A	N/A
	alpha-BHC	319-84-6	0.00014	0.066	0.66
	beta-BHC	319-85-7	0.00014	0.066	0.66
	delta-BHC	319-86-8	0.023	0.066	0.66
	Barban	101-27-9	0.056	1.4	14.0
	Bendiocarb	22781-23-3	0.056	1.4	14.0
	Benomyl	17804-35-2	0.056	1.4	14.0
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
	Benzal chloride	98-87-3		6.0	60.0
	Benzene	71-43-2	0.14	10.0	100.0
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
$\overline{}$	Benzo[ghi]perylene	191-24-2		1.8	18.0
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
$\overline{}$	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
	Bromodichloromethane	75-27-4		15.0	150.0
	Bromomethane	74-83-9		15.0	150.0
$\overline{}$	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0
	n-Butyl alchohol	71-36-3		2.6	26.0
_	Butyl benzyl phthalate	85-68-7		28.0	280.0
	Butylate	2008-41-5		1.4	14.0
ö	Carbaryl	63-25-2		0.14	1.4
<u> </u>	Carbaryi	03-23-2	0.000	U. 14	1.4

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9		3.4	34.0
	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4	0.77	5.6	56.0
=	o-Cresol	95-48-7	0.11	5.6	56.0
		106-44-5		5.6	56.0
H	p-Cresol	64-00-6		1.4	14.0
	m-Cumenyl methylcarbamate			30.0	
	Cyanide (Amenable)	57-12-5*	0.86 1.2		300.0
	Cyanide (Total)	57-12-5 108-94-1	0.36	590.0	5900.0
	Cyclohexanone 2,4-D	94-75-7	0.72	0.75 10.0	7.5
	o,p'-DDD	53-19-0		0.087	100.0
=	·			0.087	0.87
<u>_</u>	p,p'-DDD	72-54-8			0.87
<u></u>	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
<u>_</u>	p,p'-DDT Di-n-butyl phthalate	50-29-3		0.087	0.87
		84-74-2		28.0	280.0
므	Di-n-octyl phthalate	117-84-0		28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
<u>_</u>	1,2-Dibromo-3-chloropropane	96-12-8		15.0	150.0
	1,2-Dibromoethane	106-93-4		15.0	150.0
<u></u>	Dibromomethane	74-95-3		15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
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	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3		28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7		N/A	N/A
	Disulfoton	298-04-4		6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4		1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9		0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
무	Ethyl acetate	141-78-6		33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7		160.0	1600.0
	Ethyl methacrylate	97-63-2		160.0	1600.0
므	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8		0.066	0.66
	Heptachlor epoxide	1024-57-3		0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
_	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
	Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
		87-68-3 77-47-4		5.6	56.0
	Hexachlorocyclopentadiene Hexachloroethane	67-72-1	0.057 0.055	2.4 30.0	24.0
		1888-71-7		30.0	300.0
	Hexachloropropene HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	300.0
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
	lodomethane	74-88-4		65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
	Methanol	67-56-1		0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
	13.46 (WCATS PA)		intod 2/5/2021 11.	•	Page 7 of 1

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6		28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5		13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2		1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8		4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8		5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0		28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	
				15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham	122-42-9		1.4	14.0
Proposur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9	0.042	1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72 inted 2/5/2021 11:1	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.

Attachment 6

Solvent Evaporator System for Hexane Recovered from Wastewater Samples

Standard Operating Procedure Waste Stream Profiles 45282, 45283, 45286, and 47579 Container Profiles W854060, W854059, and W859264

Sample processing for solid phase extraction of PCBs from wastewater

Overview

This standard operating procedure (SOP) provides background and instructions for the extraction of polychlorinated biphenyls (PCBs) from aqueous samples with minimal particulate content. This document details procedures based on EPA SW-846 methods, including 3535A, 3665A, 3620C, and 3660B and is intended to prepare samples suitable for PCB congener analysis by EPA 8082. This SOP specifies sample extraction and appropriate sample clean-up methods selected for the expected interferants in wastewater. Evaluation of the effectiveness of the extraction and clean-up methods detailed here should be performed regularly by analyzing method blanks and matrix spike replicates. This document provides instructions at a level appropriate for those with experience in sample preparation and the handling of hazardous solvents and other chemicals. The work described here must be performed in a suitable space having appropriate administrative and engineering controls to mitigate hazards. Users of this SOP are advised to fully review this document and appropriate documents within EPA SW-846 to become familiar with specific objectives and challenges in these methods.

Procedure summary

Analyte extraction and concentration

This procedure aims to extract and concentrate the PCB fraction from aqueous samples. Because PCB action limits in water very low, often less than 1000 pg/L, highly specialized sample preparation and analytical equipment are employed. The confident detection and quantification of PCB congeners at these very low levels requires the careful concentration of the PCB fraction, as well as removal of interferants that may be present in the sample. This SOP prescribes the use of disk solid phase extraction (SPE) allows for the extraction of the PCB fraction from relatively large volumes of water (~ 1 L) and subsequent elution and concentration in a suitable solvent. By concentrating the sample from 1 L to typically 1 mL, a concentration factor of ~1000× is possible, improving analyte detectability, particularly in low level samples. The concentration step is carried out by solvent evaporation, which aims to preferentially evaporate the solvent while leaving the analytes behind.

Extract clean-up

Interfering analytes also present in the sample may also be extracted and concentrated, posing a risk to the accurate measurement of the PCB fraction in the sample. While the use of electron capture detection (ECD) reduces the impact of many potential interferants, co-extracted compounds like sulfur, phthalates, and pesticides are detected by ECD and may lead to measurement errors. To reduce the impact of these and other interferants, sample extract clean-up may be undertaken as needed to preferentially remove interferants from the sample, while leaving the PCB fraction unaltered. Three methods for extract clean-up are detailed in this SOP: Florisil SPE for the removal of phthalates, some pesticides, and polar organics; sulfuric acid and permanganate clean-up for the removal of reactive organics, including common pesticides; and copper powder clean-up for the removal of elemental sulfur. PCB losses due to clean-up steps should be accounted for using the surrogate standard.

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Waste disposal

This procedure generates several types of waste that must be handled appropriately.

The first category is biohazard: samples taken from the sanitary sewer may contain infectious agents at levels hazardous to the worker. To reduce the biohazard risk, all wastewater samples must be disinfected after extraction by adding sufficient sodium hypochlorite (chlorine bleach) to reach 0.5% concentration, then waiting 30 minutes before disposal in the sink. Further, all items that contact the wastewater samples must be disinfected by soaking in a 0.5% solution of sodium hypochlorite for 30 minutes; this includes the sample bottle, disposable and reusable extraction glassware, as well as the SPE disk. After disinfection, rinse the items and proceed with cleaning for reusable items or disposal for consumables.

The second category is solvents. During the extraction procedure, a number of solvents are used to prepare the apparatus. Collect these solvents and pour into a suitable solvent waste container, logging the approximate volumes and composition. During solvent evaporation, the solvent vapor will be exhausted to the fume hood; future method improvements will capture this solvent for reuse and/or proper disposal.

The third category is corrosives. If the sulfuric acid and permanganate clean-up is used, these reagents must be collected into separate waste containers, with the approximate volume and composition logged. If the copper clean-up is used, the nitric acid solution used to activate the copper must be transferred to an appropriate waste container; <u>CAUTION</u>: do not mix nitric acid waste with solvents!

The final category is solid wastes. The principal solid waste will be sodium sulfate used for drying the extract. After decanting the solvent from the sodium sulfate, allow to dry in the fume hood. Once the sodium sulfate is dry, transfer to an appropriate waste container and log the approximate amount and composition. If copper clean-up is used, allow the copper to dry in the fume hood then transfer to an appropriate waste container and log the approximate amount and composition.

Standards preparation

Prepare a surrogate spike mixture by diluting the surrogate spike stock solution with methanol in a clean volumetric flask. The final concentration of the surrogate spike solution should be 20 μ g/L for each surrogate.

Prepare a matrix spike mixture by diluting the matrix spike stock solution with acetone in a clean volumetric flask. The final concentration of the surrogate spike solution should be 100 μ g/L for each matrix recovery compound.

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Sample preparation

1. Solid phase extraction of aqueous sample

1.1 Indicated use of this method

This method describes a procedure for isolating target organic analytes from aqueous samples using solid-phase extraction (SPE) media. The method describes conditions for extracting a variety of organic compounds from aqueous matrices that include: groundwater, wastewater, and TCLP leachates. The method describes the use of disk extraction media. The technique may also be applicable to other semivolatile or extractable compounds. It may also be used for the extraction of additional target analytes or may employ other solid-phase media, provided that the analyst demonstrates adequate performance (e.g., recovery of 70 -130%, or project-specific recovery criteria) using spiked sample matrices and an appropriate determinative method. The use of organic-free reagent water alone is not considered sufficient for conducting such performance studies, and must be supported by data from actual sample matrices.

This method also provides procedures for concentrating extracts and for solvent exchange. Solid-phase extraction is called liquid-solid extraction in some methods associated with the Safe Drinking Water Act.

1.2 Summary of the method

- 1.2.1 Sample preparation procedures vary by analyte group. Extraction of some groups requires that the pH of the sample be adjusted to a specified value prior to extraction. Correcting the pH may also be necessary to avoid damaging the solid phase extraction disk.
- 1.2.2 Following any necessary pH adjustment, a measured volume of sample is extracted by passing it through the solid-phase extraction medium (disks or cartridges), which is held in an extraction device designed for vacuum filtration of the sample.
- 1.2.3 Target analytes are eluted from the solid-phase media using an appropriate solvent which is collected in a receiving vessel. An initial elution with a water-miscible solvent, i.e., acetone or acetonitrile, improves the recovery of analytes trapped in water-filled pores of the sorbent. Use of a water-miscible solvent is particularly critical when dichloromethane is used as the second elution solvent. The resulting solvent extract is dried using sodium sulfate and concentrated.
- 1.2.4 As necessary, the concentrated extract may be exchanged into a solvent compatible extract with subsequent cleanup procedures or determinative procedures for the measurement of the target analytes.

1.3 Interferences

1.3.1 Bonded-phase silica (e.g., C18) will hydrolyze on prolonged exposure to aqueous samples with pH less than 2 or greater than 9. Hydrolysis will increase at the extremes of this pH range and with longer contact times. Hydrolysis may reduce extraction efficiency or cause baseline irregularities. Styrene divinylbenzene (SDB) extraction disks should be considered when hydrolysis is a problem.

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- 1.3.2 Phthalates are a ubiquitous laboratory contaminant. All glass extraction apparatus should be used for this method because phthalates are used as release agents when molding rigid plastic (e.g., PVC) and as plasticizers for flexible tubing. A method blank should be analyzed, demonstrating that there is no phthalate contamination of the sodium sulfate or other reagents listed in this method.
- 1.3.3 Sample particulates may clog the solid-phase media and result in extremely slow sample extractions. Use of an appropriate filter aid will result in shorter extractions without loss of method performance if clogging is a problem. Even when a filter aid is employed, this method may not be appropriate for aqueous samples with high levels of suspended solids (>1%), as the extraction efficiency may not be sufficient, given the small volumes of solvents employed and the short contact time.

1.4 Apparatus

- 1.4.1 Solid-phase disk extraction system Empore™ manifold that holds three 90-mm filter standard apparatus or six 47-mm standard filter apparatus, or equivalent. Other manual, automatic, or robotic sample preparation systems designed for solid-phase media may be utilized for this method if adequate performance is achieved and all quality control requirements are satisfied.
 - 1.4.1.1 Manifold station Supelco 6-position ENVI-DISK Holder Manifold
 - 1.4.1.2 Standard filter apparatus Supelco 47 mm ENVI-DISK Holder
 - 1.4.1.3 Collection tube Pyrex culture tube, rimless, diam. × L 25 mm × 200 mm
 - 1.4.1.4 Filter flask 1-L with a ground-glass receiver joint VWR Flask Filter, 40/35, 1000 ml
 - 1.4.1.5 Vacuum pump KNF Laboport Mini Laboratory Pump, UN86KTP
 - 1.4.1.6 Solid-phase extraction disks ENVI, 47-mm, C-18 bonded. C18 disks Supelco ENVI-18 DSK SPE Disk (47mm, 24-pk)

C18 fast flow disks – Empore™ disks, 47-mm diameter (3M product number 98-0503-0138-5), or equivalent. These disks may be a better choice for samples that are difficult to filter even with the use of a filter aid.

1.4.2 Glassware: Pasteur pipettes, 50 mL beaker, 50 mL graduated cylinder

1.5 Reagents

Reagent grade inorganic chemicals shall be used in all tests. Reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. The use of other grades must be first demonstrated to not lessen the accuracy of the determination.

- 1.5.1 Surrogate spike tetrachloroxylene and decaCB at 20 μg/L in methanol
- 1.5.2 Organic-free reagent water, as used in other sections of this document.
- 1.5.3 Methanol (CH₃OH), pesticide grade or equivalent Supelco SupraSolv grade
- 1.5.4 Dichloromethane (CH₂Cl₂), pesticide grade or equivalent Supelco SupraSolv grade
- 1.5.5 Acetone (C₃H₆O), pesticide grade or equivalent Supelco SupraSolv grade
- 1.5.6 Hexane (C₆H₁₄), pesticide grade or equivalent Supelco SupraSolv grade

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1.5.7 Sodium sulfate (granular, anhydrous), Na2SO4 – Purify by heating at 400 °C for 4 hrs in a shallow tray, or by precleaning the sodium sulfate with methylene chloride. A method blank should be analyzed in order to demonstrate that there is no interference from the sodium sulfate.

1.6 Sample preparation

The extraction of aqueous samples presents several challenges that must be considered during sample preparation. First, PCBs have a tendency to associate with particulate matter in the sample; sample preparation procedures must ensure that any particulates in the original sample are included in the sample aliquot that is extracted. Second, PCBs are hydrophobic and may preferentially adhere to the surfaces of the sample container; once the sample has been transferred to the extraction apparatus, the sample container is rinsed with solvent which is added to the apparatus. It is generally not appropriate to extract only part of the sample from a sample container, e.g., 250 mL from a 1-L sample bottle.

The appropriate sample volume may vary with the intended use of the results and, in general, is the volume necessary to provide the analytical sensitivity necessary to meet the objectives of the project. Under ideal conditions, the sample should be collected by completely filling the container. The sample should generally be collected without additional volume and with little or no headspace. Thus, a 1-L sample is collected in a 1-L container, a 250-mL sample is collected in a 250-mL container, etc.

Surrogates and matrix spiking compounds (if applicable) are added to the sample in the original container. The container is then recapped and shaken to mix the spiked analytes into the sample. The extraction may also require that the pH of the sample be adjusted to a specified range. When pH adjustment is necessary, it should be performed after the surrogates and matrix spiking compounds (if applicable) have been added and mixed with the sample. Otherwise, the recoveries of these compounds will have little relevance to those of the target analytes in the sample.

NOTE: This method may not be appropriate for aqueous samples with greater than 1% solids, as such samples can be difficult to filter and the extraction efficiency may be reduced as a result of the small volumes of solvents employed and the short contact time. If the particulate load significantly slows or prevents filtration, it may be more appropriate to employ an alternative extraction procedure.

- 1.6.1 Mark the level of the sample on the outside of the sample container with a permanent marker for later determination of the sample volume used. Shake the container for several minutes, with the cap tightly sealed, to ensure that any particulate matter is evenly distributed throughout the sample.
- 1.6.2 Prepare a method blank from a 1-L volume of organic-free reagent water, or a volume similar to that of the samples (e.g., a 250-mL blank should be used when the sample size is 250 mL, etc.). Use a graduated cylinder to measure the water. The blank should be prepared in a fresh sample bottle of the same batch used for sample collection, if possible.

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- 1.6.3 Add 5.00 mL of 20 µg/L surrogate standard in methanol to each sample and blank, using a 5 mL volumetric pipette. All samples, blanks, and QC samples should receive the same amount of methanol. Thoroughly shake the samples for several minutes to mix the surrogates and allow the sample to stand for at least several minutes. This will permit the surrogates to dissolve in the sample and will also allow the particulate matter to settle after spiking, which will speed the filtration process somewhat.
- 1.6.4 Prepare matrix spikes by adding listed matrix spike standards to representative sample replicates in their original containers. Mix the matrix spike samples as described above and allow to stand.

1.6.5 pH adjustment

1.6.5.1 Check the pH of the sample with wide-range (0-14) pH paper and record in the sample log. If necessary, adjust the pH to fall within the range of pH 5-9. Use 1 M HCl or NaOH solutions for adjustments. If pH adjustment is required, this step should be performed in the original sample container to ensure that analytes are not lost in precipitates or flocculated material. Any adjustment of the sample pH should take place after the surrogates and matrix spiking compounds are added, so that they are affected by the pH in the same manner as the target analytes. Measure the final pH of the adjusted sample using narrow-range (5.0-9.0) pH paper and record in the sample log.

1.7 Solid phase extraction

- 1.7.1 Assemble the manifold for multiple disk extractions using an ENVI 47-mm C-18 SPE disk.
- 1.7.2 If samples contain significant quantities of particulates, the use of a filter aid or prefilter is advisable for disk extractions. Empore™ Filter Aid 400 is recommended.
 - 1.7.2.1 Pour about 40 g of Filter Aid 400 onto the surface of the disk after assembling the standard filter apparatus.
- 1.7.3 Preparing the extraction apparatus:
 - Prior to use, the extraction disks must undergo a washing and conditioning steps, detailed below. Collect the wash and conditioning solvents in the 1 L collection flask. The extraction disks are composed of hydrophobic materials which will not allow water to pass unless they are pre-wetted with a water-miscible solvent before being used for sample extraction. This step is referred to as conditioning. NOTE: Beginning with the conditioning step, it is CRITICAL that the disk NOT go dry until after the extraction steps are completed. Should a disk accidentally go dry during the conditioning steps, the conditioning steps for that disk must be repeated prior to adding the sample.
 - 1.7.3.1 1st washing step: wash the extraction apparatus and disk with 20 mL of dichloromethane by rinsing the solvent down the sides of the glass reservoir. Pull a small amount of solvent through the disk with vacuum. Isolate the extraction apparatus from the vacuum and allow the disk to soak for about one minute. Then pull the remaining solvent through the disk and allow the disk to dry under vacuum.
 NOTE: If using a filtration aid, increase the amount of all wash and conditioning solvents so that the entire filter bed is submerged during washing.
 - 1.7.3.2 2nd washing step: repeat the above washing procedure using 10 mL of acetone.

- 1.7.3.3 Disk conditioning methanol rinse: add 20 mL of methanol to the extraction apparatus. Apply a vacuum until a few drops of solvent pass through the disk, ensuring that the disk is soaked with the solvent. Isolate the vacuum and allow the disk to soak in the solvent for one minute. Once the soaking time is over, apply the vacuum again, drawing down the solvent to 2-3 mm above the disk. Stop the vacuum just before the disk goes dry!

 NOTE: When using a filtration aid, adjust the volume of conditioning solvents so that the entire filtration bed remains submerged until the extraction is completed.
- 1.7.3.4 Disk conditioning water rinse: add 20 mL of reagent water and apply vacuum to draw the water through the disk. Stop the vacuum just before the disk goes dry, leaving 2-3 mm of water above the surface of the disk or filter bed if a filtration aid is used.
- 1.7.3.5 Transfer the collected wash and conditioning solvents to the solvent waste container.

1.7.4 Sample extraction

- 1.7.4.1 Pour the sample into the reservoir and, under full vacuum, filter it as quickly as the vacuum will allow (at least 10 minutes). Transfer as much of the liquid sample as possible. Due to the long filtration time, this step may easily be performed in parallel with other samples.
 - <u>NOTE</u>: With high-particulate samples, allow the sediment in the sample to settle and decant into the reservoir. After most of the aqueous portion of the sample has passed through the disk, swirl the portion of the sample containing sediment and add it to the reservoir. Use additional portions of organic-free reagent water to transfer any remaining particulates to the reservoir. Particulates must be transferred to the reservoir before all of the aqueous sample has passed through the disk.
- 1.7.4.2 After the sample has passed through the solid-phase media, dry the disk by maintaining vacuum for about 3 minutes. Method blanks and matrix spike aliquots are handled in the same manner as the samples.
- 1.7.4.3 Remove the filter assembly (do not disassemble) from the collection flask and pour the water from the collection flask into the bleach disinfection container.

1.7.5 Elution of the PCBs from the SPE disk

- 1.7.5.1 After emptying the water from the collection flask, insert a 25 mm × 200 mm glass collection tube. The drip tip of the filtration apparatus should be seated sufficiently below the neck of the collection tube to prevent analyte loss due to splattering when vacuum is applied.
- 1.7.5.2 With the collection tube in place, add 5 mL of acetone to the extraction apparatus. Allow the solvent to spread out evenly across the disk (or inert filter) then quickly turn the vacuum on and off to pull the first drops of solvent through the disk. Allow the disk to soak for 15 to 20 seconds before proceeding to the next step.
- 1.7.5.3 Rinse the sample bottle with 20 mL of dichloromethane and transfer the solvent rinse to the extraction apparatus. As needed, use a disposable pipette to rinse the sides of the extraction apparatus with solvent from the bottle. If using a filtration aid, adjust the volume of elution solvent so that the entire filtration bed is initially submerged.

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- 1.7.5.4 Draw about half of the solvent through the disk, then isolate the vacuum. Allow the remaining elution solvent to soak the disk and particulates for about one minute before drawing the remaining solvent through the disk under vacuum.
- 1.7.5.5 Repeat the bottle rinsing step as listed in the previous two steps, continuing to apply vacuum and collecting the solvent in the tube.
- 1.7.6 Sample concentration by solvent evaporation
 - 1.7.6.1 Add 5.0 g of clean anhydrous sodium sulfate to the collection tube. Swirl the collection tube to dry the extract.
 - 1.7.6.2 Transfer to a clean Labconco evaporation tube, decanting to eliminate any sodium sulfate during the process.
 - 1.7.6.3 Rinse the collection tube with 20 mL of dichloromethane, decanting this rinsate into the Labconco evaporation tube
 - 1.7.6.4 Set the Labconco evaporator block temperature to 35 °C, vortex speed to 70, and timer to 60 minutes. Place the evaporation tubes into the block, activate the appropriate gas positions, and start the run. Evaporate the solvent volume to 1 mL using a gentle stream of clean, dry nitrogen (filtered through a column of activated carbon, optional).
 <u>CAUTION</u>: New plastic tubing must not be used between the carbon trap and the sample, since it may introduce phthalate interferences.
 - 1.7.6.5 Monitor the evaporation of the solvent periodically, increasing the monitoring interval once the endpoint is approached. To improve recoveries, rinse down the internal wall of the concentrator tube several times with solvent during the concentration. The extract must <u>not</u> be allowed to become dry.
 <u>CAUTION</u>: When the volume of solvent is reduced below 1 mL, some the more volatile PCB congeners may be lost.
- 1.7.6.6 Perform a solvent exchange to hexane by adding 10 mL of hexane to the concentrator tube, rinsing the solvent down the sides of the tube. Increase the block temperature to 60 °C and start the evaporator. Reduce the hexane extract to a final volume of 1 mL, being careful to avoid evaporating the extract beyond the endpoint.
- 1.7.6.7 Using a long stemmed Pasteur pipette, transfer the extract for cleanup, as described in the following sections. If further handling of the extract will not be performed immediately, transfer the extract to a vial with a PTFE-lined screw-cap, and label appropriately.
- 2. Sulfuric acid and permanganate clean-up to remove unsaturated hydrocarbons and reactive chlorinated pesticides

The following method is based on EPA SW-846 Method 3665A.

2.1 Indicated use of this method

This method is suitable for the rigorous cleanup of sample extracts prior to analysis for polychlorinated biphenyls. This method should be used whenever elevated baselines or overly complex chromatograms prevent accurate quantitation of PCBs. This method may also be indicated when a colored extract is presented. This method cannot be used to cleanup extracts for other target analytes, as it will destroy most organic chemicals including the pesticides Aldrin, Dieldrin, Endrin, Endosulfan (I and II), and Endosulfan sulfate.

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2.2 Method summary

An extract is solvent exchanged to hexane, then the hexane is sequentially treated with (1) concentrated sulfuric acid and, if necessary, (2) 5% aqueous potassium permanganate. Appropriate caution must be taken with these corrosive reagents.

Blanks and replicate analysis samples must be subjected to the same cleanup as the samples associated with them. It is important that all the extracts be exchanged to hexane before initiating the following treatments.

2.3 Interferences

This technique will not destroy chlorinated benzenes, chlorinated naphthalenes (Halowaxes), and a number of chlorinated pesticides.

2.4 Apparatus

- 2.4.1 Pasteur pipettes.
- 2.4.2 Vials 1, 2 and 10 mL, glass with polytetrafluoroethylene (PTFE)-lined screw caps.
- 2.4.3 Vortex mixer.

2.5 Reagents

Reagent grade inorganic chemicals shall be used in all tests. Reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. The use of other grades must be first demonstrated to not lessen the accuracy of the determination.

- 2.5.1 Organic-free reagent water, as used in other sections of this document.
- 2.5.2 Sulfuric acid/Water (H_2SO_4/H_2O), mixed 1:1 (v/v).
- 2.5.3 Hexane (C_6H_{14}) , pesticide grade or equivalent.
- 2.5.4 Potassium permanganate (KMnO₄), 5% aqueous solution (w/v).

2.6 Sulfuric acid clean-up

- 2.6.1 Using a Pasteur pipet, transfer the hexane extract to a 10 mL vial and, in a fume hood, carefully add 5 mL of the 1:1 sulfuric acid/water solution.
 <u>CAUTION</u>: Make sure that there is no exothermic reaction nor evolution of gas prior to proceeding.
- 2.6.2 Cap the vial tightly and vortex for one minute. A vortex must be visible in the vial.
 <u>CAUTION</u>: Stop the vortexing immediately if the vial leaks. AVOID SKIN CONTACT, SULFURIC ACID BURNS.
- 2.6.3 Allow the phases to separate for at least 1 minute. Examine the top (hexane) layer; it should not be highly colored nor should it have a visible emulsion or cloudiness.
- 2.6.4 If a clean phase separation is achieved, proceed to Sec. 2.6.6.
- 2.6.5 If the hexane layer is colored or the emulsion persists for several minutes, remove the sulfuric acid layer from the vial and dispose of it properly. Add another 5-mL portion of the clean 1:1 sulfuric acid/water solution and perform another acid cleanup (2.6.1-2.6.3).

 NOTE: Do not remove any hexane from the vial at this stage of the procedure.

- 2.6.6 Transfer the hexane layer to a clean 10-mL vial. Take care not to include any of the acid layer in this clean vial, as it can cause damage to the analytical instrumentation. Once the hexane layer is removed, perform a second extraction of the acid layer, described below:
 - 2.6.6.1 Add an additional 1 mL of hexane to the sulfuric acid layer, cap and shake. This second extraction is done to ensure quantitative transfer of the PCBs.
- 2.6.7 If the extract is still colored, proceed with the permanganate cleanup (Sec. 2.7). If the extract is not colored, the analyst may proceed with the final preparation (Sec. 2.8).

2.7 Permanganate clean-up

The permanganate cleanup should be employed when the sulfuric acid cleanup has not removed all of the color from an extract.

- 2.7.1 Add 5 mL of the 5 percent aqueous potassium permanganate solution to the combined hexane fractions from 2.6.6.
 <u>CAUTION</u>: Make sure that there is no exothermic reaction nor evolution of gas prior to proceeding.
- 2.7.2 Cap the vial tightly and vortex for 1 minute. A vortex must be visible in the vial. <u>CAUTION</u>: Stop the vortexing immediately if the vial leaks. AVOID SKIN CONTACT, POTASSIUM PERMANGANATE BURNS.
- 2.7.3 Allow the phases to separate for at least 1 minute. Examine the top (hexane) layer, it should not be highly colored nor should it have a visible emulsion or cloudiness.
- 2.7.4 If a clean phase separation is achieved, proceed to Sec. 2.7.6.
- 2.7.5 If the hexane layer is colored or the emulsion persists for several minutes, remove the permanganate solution from the vial via a glass pipette and dispose of it properly. Add another 5 mL of the clean aqueous permanganate solution. Vortex the sample and allow the phases to separate.
 - NOTE: Do not remove any hexane at this stage of the procedure.
- 2.7.6 Transfer the hexane layer to a clean 10 mL vial.
- 2.7.7 Add an additional 1 mL of hexane to the permanganate layer, cap the vial securely and shake. This second extraction is done to ensure quantitative transfer of the PCBs.
- 2.7.8 Remove the second hexane layer and combine with the hexane from Sec. 7.2.7.

2.8 Final preparation

- 2.8.1 Reduce the volume of the combined hexane layers to the original volume (1 mL) using the VisiDry N₂ blowdown manifold.
- 2.8.2 Remove any remaining organochlorine pesticides from the extracts using Florisil Cleanup (Method 3620).

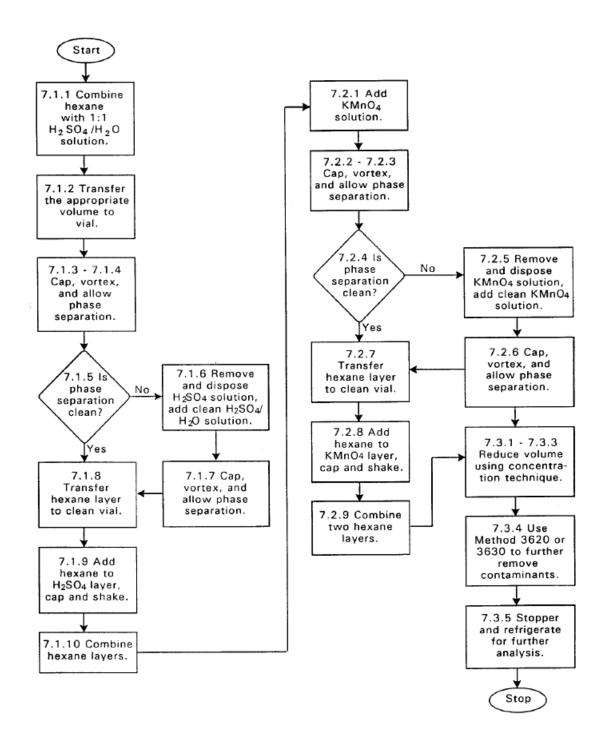


Figure 1 - Flowchart for sulfuric acid/permanganate clean-up

3. Florisil SPE clean-up to remove polar interferants and reduce phthalates and organochlorine pesticides

The following method is based on EPA SW-846 Method 3620C

3.1 Indicated use of this method

Florisil®, a registered trade name of U. S. Silica Co., is a magnesium silicate with basic properties. It is used to separate analytes from interfering compounds prior to sample analysis by a chromatographic method. Florisil® has been used for the cleanup of pesticide residues and other chlorinated hydrocarbons; the separation of nitrogen compounds from hydrocarbons; the separation of aromatic compounds from aliphatic-aromatic mixtures; and similar applications for use with fats, oils, and waxes. Additionally, Florisil® is considered good for separations with steroids, esters, ketones, glycerides, alkaloids, and some carbohydrates. Florisil® cleanup may be accomplished using solid-phase extraction cartridges containing Florisil®.

This method includes procedures for cleanup of sample extracts containing the following analyte groups: Phthalate esters, Chlorinated hydrocarbons, Nitrosamines, Organochlorine pesticides, Nitroaromatics, Organophosphates, Haloethers, Organophosphorus pesticides, Aniline and aniline derivatives, and PCBs. Other analytes may potentially be cleaned up using this method provided that adequate performance is demonstrated.

3.2 Summary of the method

This method describes procedures for Florisil® cleanup of solvent extracts of environmental samples. It provides the option of using either traditional column chromatography techniques or solid-phase extraction cartridges. Generally, the traditional column chromatography technique uses larger amounts of adsorbent and, therefore, has a greater cleanup capacity. This document has selected the solid-phase extraction cartridges for clean-up.

The cartridge cleanup protocol uses solid-phase extraction cartridges containing 40 μ m particles of Florisil® (60 Å pores). Each cartridge is washed with solvent immediately prior to use. The sample extract is loaded onto the cartridge which is then eluted with suitable solvent(s). A vacuum manifold is necessary to obtain reproducible results. The eluate may be further concentrated prior to gas chromatographic analysis.

3.3 Interferences

Solvents, reagents, glassware, and other sample processing hardware may yield artifacts and/or interferences to sample analysis. All of these materials must be demonstrated to be free from interferences under the conditions of the analysis by analyzing method blanks. Specific selection of reagents and purification of solvents by distillation in all glass systems may be necessary.

A reagent blank should be prepared and analyzed for the compounds of interest prior to the use of this method. The level of interferences must meet the QC acceptance criteria for blanks that are specified in a project planning document, e.g. QAPP, SAP, or in a laboratory SOP.

The procedures for reagent purification outlined here should be considered to be the minimum needed for successful use of this method. More extensive procedures may be necessary to achieve acceptable levels of interferences for some analytes. However, during the evaluation of the cartridge cleanup procedure, phthalate esters were detected in the Florisil® cartridge method blanks at concentrations of up to 400 ng per cartridge. Therefore, complete removal of the phthalate esters from Florisil® cartridges may not be possible. Phthalate ester contamination may be a problem with certain cartridges. The more inert the column and/or cartridge material (i.e., glass or polytetrafluoroethylene (PTFE)), the fewer

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problems with phthalates contamination will occur. Phthalates create interference problems for all method analytes, not just the phthalate esters themselves.

3.4 Apparatus and consumables

This section does not list common laboratory glassware (e.g., beakers and flasks).

- 3.4.1 Vials -- Glass, 10-mL and 25-mL capacity, fitted with polytetrafluoroethylene (PTFE)-lined screw caps or crimp tops.
- 3.4.2 Vacuum manifold Visiprep (Supelco, Inc.), consisting of glass vacuum basin, collection rack and funnel, collection vials, replaceable stainless steel delivery tips, built-in vacuum bleed valve and gauge. The system is connected to a vacuum pump through a vacuum trap made from a 500-mL sidearm flask fitted with a one-hole stopper and glass tubing. The manifold is necessary for use of the cartridge cleanup protocol.

3.5 Reagents

Reagent grade chemicals shall be used in all tests. Reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. The use of other grades must be first demonstrated to not lessen the accuracy of the determination. Reagents should be stored in glass to prevent the leaching of contaminants from plastic containers.

- 3.5.1 Organic-free reagent water, as used in other sections of this document.
- 3.5.2 Sodium sulfate (granular, anhydrous), Na2SO4 -- Purify by heating at 400 °C for 4 hrs in a shallow tray, or by precleaning the sodium sulfate with methylene chloride. A method blank should be analyzed in order to demonstrate that there is no interference from the sodium sulfate.
- 3.5.3 Hexane (C_6H_{14}) , pesticide grade or equivalent.
- 3.5.4 Florisil® cartridge phenol check solution (for the organochlorine pesticide technique) -- Prepare a solution of 2,4,5-trichlorophenol in acetone at a concentration of 0.1 mg/L. See the note in Sec. 7.12.
- 3.5.5 Florisil® cartridge PCB check solution -- Prepare a solution containing the 8082 PCB standard in hexane at 10 µg/L.
- 3.5.6 Florisil® cartridges -- 40 µm particles, 60 Å pores. The cartridges from which this method were developed consist of 6-mL serological grade polypropylene tubes, with the 1 g of Florisil® held between two polyethylene or stainless steel frits with 20 µm pores. Cartridges containing 0.5 g and 2.0 g of Florisil® are available, however, the compound elution patterns should be verified when cartridges containing other than 1 g of Florisil® are used.

The Florisil activity needs to be verified using a recovery test. This test needs to be conducted on each batch of Florisil® following its activation (Sec. 7.3).

3.5.7 The efficiency of each lot of the solid-phase extraction cartridges needs to be verified. Only lots of cartridges from which the spiked analytes are quantitatively recovered may be used to process the samples. A check should also be performed at least once on each individual lot of cartridges and at least once for every 300 cartridges of a particular lot, whichever frequency is greater.

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- 3.5.8 To check each new lot of Florisil® cartridges before use, perform the following in duplicate:
 - 3.5.8.1 Combine 0.5 mL of the 2,4,5-trichlorophenol solution in Sec. 7.11, 1.0 mL of the pesticide solution in Sec. 7.12, and 0.5 mL of hexane in a vial.
 - 3.5.8.2 Condition the cartridge as described in Sec. 11.1 and then perform the cartridge cleanup starting with Sec. 11.7.
 - 3.5.8.3 Elute the cartridge with 10 mL of hexane. Reduce the volume to 1.0 mL and analyze by Method 8082.
 - 3.5.8.4 The lot of Florisil® cartridges is acceptable if all PCBs are recovered at 80 to 110%, if the recovery of trichlorophenol is less than 5%, and if no peaks interfering with the target analytes are detected.

Any method blanks, matrix spike samples, or replicate samples should be subjected to the same analytical procedures (Sec. 11.0) as those used on actual samples. For sample extracts that are cleaned up using this method, the associated quality control samples should also be processed through this cleanup method.

3.6 Procedure

Sec. 11.1 describes the procedures for assembling and conditioning the Florisil® cartridges. Sec. 11.2 describes general procedures for handling sample extracts prior to cleanup. Sec .11.3 describes the cartridge procedure for PCBs. If the interference is caused by high boiling materials, then Method 3640 should be employed prior to Florisil® cleanup. If the interference is caused by relatively polar compounds in the same boiling range as the analytes of interest, then multiple column or cartridge cleanups may be necessary. For additional cleanup of organochlorine pesticides and PCBs, see Method 3665. If crystals of sulfur are present in the extract, then Method 3660 should be employed prior to Florisil® cleanup.

Whenever Florisil® is used to fractionate groups of target compounds (rather than to simply remove potential interferants) it is critical that the specific fractionation scheme be validated using spiked solutions or spiked sample extracts that contain most or all of the analytes of interest. This may be particularly important when the Florisil® cartridge techniques are employed, because the differences between the various cartridge formats and manufacturers may affect the fractionation patterns. In addition, it may be useful to archive any fractions not originally intended for analysis, in the event that the fractionation scheme chosen does not yield the intended results.

Once the determinative analysis has been performed and demonstrates that the fractionation has been successful, such archived fractions may be disposed of in an appropriate manner. However, if the fractionation did not perform as intended, the analytes of interest may be contained in the archived fractions which may be analyzed or combined with the other fraction(s) for reanalysis.

Following Florisil® cleanup, extracts may need further concentration and/or solvent exchange.

- 3.6.1 Cartridge set-up and conditioning
 - 3.6.1.1 Arrange the cartridges on the manifold in the closed-valve position.
 - 3.6.1.2 Turn on the vacuum pump and set the vacuum to 10 in (254 mm) of Hg. Do not exceed the manufacturer's recommendation for manifold vacuum. Flow rates may be controlled by opening and closing cartridge valves.

- 3.6.1.3 Condition the cartridges by adding 4 mL of hexane to each cartridge. Slowly open the cartridge valves to allow hexane to pass through the sorbent beds to the lower frits. Allow a few drops per cartridge to pass through the manifold to remove all air bubbles. Close the valves and allow the solvent to soak the entire sorbent bed for 5 minutes. Do not turn off the vacuum.
- 3.6.1.4 Slowly open cartridge valves to allow the hexane to pass through the cartridges. Close the cartridge valves when there is still at least 1 mm of solvent above the sorbent bed. Do not allow the cartridges to become dry. If cartridges go dry, repeat the conditioning step.

3.6.2 Handling sample extracts

Most sample extracts have to be concentrated to a smaller volume prior to the use of Florisil® cleanup. The extract volume is a function of the analytical sensitivity necessary to meet the project objectives. The extract volume will also affect the ability of the Florisil® to separate target analytes from potential interferences, particularly for the cartridge procedures, where applying large extract volumes to the cartridges may cause poor results.

- 3.6.2.1 If the extract was in cold storage, allow it to reach room temperature. Inspect the extract visually to ensure that there are no particulates or phase separations and that no evaporative loss has taken place. If crystals of sulfur are visible or if the presence of sulfur is suspected, proceed with Method 3660.
- 3.6.3 Cartridge procedure for organochlorine pesticides and PCBs
 - 3.6.3.1 Using 1-g Florisil® SPE tubes, condition the tube beds with hexane, as described in 3.6.1.
 - 3.6.3.2 Transfer the extract from the collection tube to the SPE tube. Open the cartridge valve to allow the extract to pass through the cartridge bed at approximately 2 mL/min.
 - 3.6.3.3 When the entire extract has passed through the tube bed, but before the bed becomes dry, rinse the collection tube with an additional 0.5 mL of hexane, and add the rinse to the cartridge to complete the quantitative transfer.
 - 3.6.3.4 Close the cartridge valve and turn off the vacuum after the solvent has passed through, ensuring that the tube bed never goes dry.
 - 3.6.3.5 Place a 10-mL collection tube into the sample rack corresponding to the SPE tube position. Attach a solvent rinsed stainless steel solvent guide to the manifold cover and align with the collection tube.
 - 3.6.3.6 The following steps remove several organochlorine pesticide and polar interferants from the extract, while recovering the PCBs in the extract.
 - 3.6.3.7 Turn on the vacuum pump and adjust the pump pressure to 10 inches (254 mm) of Hg. Add 3 mL of hexane to the SPE tube. Allow the solvent to soak the sorbent bed for 1 min or less. Slowly open the SPE tube's valve and collect the eluate into the collection vial. This is the primary fraction and it will contain the PCBs and a few of the organochlorine pesticides (see Tables 1 and 2). Allow all of the hexane to elute from the SPE tube, then properly dispose of the tube.
 - 3.6.3.8 Attach the VisiDry N₂ blowdown manifold to the VisiPrep and adjust to a gentle stream of nitrogen to evaporate the eluate to a volume of 1.0 mL.

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3.7 References

- J. Gordon and R. A. Ford, The Chemist's Companion: A Handbook of Practical Data, Techniques, and References, New York: John Wiley & Sons, Inc., pp. 372, 374, and 375, 1972.
- 2. Floridin of ITT System, Florisil: Properties, Application, Bibliography, Pittsburgh, Pennsylvania, 5M381DW.
- 3. P. A. Mills, "Variation of Florisil Activity; Simple Method for Measuring Absorbent Capacity and its use in Standardizing Florisil Columns," Journal of the Association of Official Analytical Chemists, 51, 29, 1968.
- 4. U.S. Food and Drug Association, Pesticides Analytical Manual (Volume 1), July 1985.
- 5. V. Lopez-Avila, J. Milanes, N. S. Dodhiwala, and W.F. Beckert, "Cleanup of Environmental Sample Extracts Using Florisil Solid-Phase Extraction Cartridges," J. Chrom. Sci. 27, 209-215, 1989.
- 6. U.S. EPA, "Evaluation of Sample Extract Cleanup Using Solid Phase Extraction Cartridges," Project Report, December 1989.
- 7. U.S. EPA Method 608, Organochlorine Pesticides and PCBs, 40 CFR 136, October 26, 1984.

3.8 Method performance

Table 1 - Example average recoveries of Aroclors from Florisil cartridges

Compound	Average Recovery (%)
Aroclor 1016	105
Aroclor 1221	76
Aroclor 1232	90
Aroclor 1242	94
Aroclor 1248	97
Aroclor 1254	95
Aroclor 1260	90

Table 2 - Example elution patterns and recoveries of organochlorine pesticides from Florisil cartridges

	Fract	Fraction 1		ion 2	Fraction 3	
	% Rec.	RSD	% Rec.	RSD	% Rec.	RSD
α-ВНС	-	-	111	8.3	-	-
β-ВНС	-	-	109	7.8	-	-
ү-ВНС	-	-	110	8.5	-	1
δ-BHC	-	-	106	9.3	-	-
Heptachlor	98	11	-	-	-	-
Aldrin	97	10	-	-	-	1
Heptachlor epoxide	-	-	109	7.9	-	-
Chlordane	-	-	105	3.5	-	-
Endosulfan I	-	-	111	6.2	-	-
4,4'-DDE	104	5.7	-	-	-	1
Dieldrin	-	-	110	7.8	-	-
4,4'-DDD	-	-	111	6.2	-	-
Endosulfan II	-	-	-	-	111	2.3
Endrin aldehyde	-	-	49	14	48	12
4,4'-DDT ^b	40	2.6	17	24	63	3.2
Endosulfan sulfate ^b	-	-	-	-	-	-
Methoxychlor	-	-	85	2.2	37	29

^a1 g Florisil[®] cartridges spiked with 0.5 μg of each compound.

Eluant composition: Fraction 1 -- 3 mL of hexane, Fraction 2 -- 5 mL of methylene chloride/hexane (26/74, v/v), Fraction 3 -- 5 mL of acetone/hexane (10/90, v/v)

4. Copper clean-up to remove elemental sulfur (S₈)

The following method is based on EPA SW-846 Method 3660B

4.1 Indicated use of this method

Elemental sulfur is encountered in many sediment samples (generally specific to different areas in the country), marine algae, and some industrial wastes. The solubility of sulfur in various solvents is very similar to the PCBs. Therefore, the sulfur interference follows along with the PCBs through the normal extraction and cleanup techniques. In general, sulfur will usually elute entirely in Fraction 1 of the Florisil cleanup (Method 3620C).

Sulfur will be quite evident in gas chromatograms obtained from electron capture detectors. If the gas chromatograph is operated at the normal conditions for PCB analysis, the sulfur interference can completely mask a large region of the chromatogram from the solvent peak onward.

Two techniques for the elimination of sulfur are recommended: (1) the use of copper powder; and (2) the use of tetrabutylammonium sulfite. Tetrabutylammonium sulfite causes the least amount of degradation of a broad range of pesticides and organic compounds, while copper may degrade organophosphorus and some organochlorine pesticides. Because this document focuses only on the PCB

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^bThese two compounds coelute on the DB-5 capillary column.

content of the samples, the degradation of interfering pesticides is beneficial, so the copper powder method has been selected.

4.2 Summary of the method

The sample to undergo cleanup is mixed with either copper powder. The mixture is shaken and the extract is removed from the sulfur cleanup reagent.

4.3 Interferences

The copper technique requires that the copper powder be very reactive, as evidenced by a bright shiny appearance (see Sec. 5.5 for the preparation of this reagent). However, care must be taken to remove all traces of the acid used to prepare the copper, in order to avoid degradation of some analytes.

4.4 Apparatus and consumables

- 4.4.1 Mechanical shaker or mixer Vortex Genie or equivalent.
- 4.4.2 Pipets, disposable Pasteur type.
- 4.4.3 Centrifuge tubes, calibrated 12 mL.
- 4.4.4 Glass bottles or vials 10 mL and 50 mL, with polytetrafluoroethylene (PTFE)-lined screw caps or crimp tops.

4.5 Reagents

Reagent grade chemicals shall be used in all tests. Reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. The use of other grades must be first demonstrated to not lessen the accuracy of the determination.

- 4.5.1 Organic-free reagent water, as used in other sections of this document.
- 4.5.2 Nitric acid (HNO₃), dilute
- 4.5.3 Acetone (CH₃COCH₃), pesticide quality or equivalent.
- 4.5.4 Hexane (C_6H_{14}), pesticide grade or equivalent.
- 4.5.5 Copper powder Remove oxides by treating with dilute nitric acid, rinse with organic-free reagent water to remove all traces of acid, rinse with acetone and dry under a stream of nitrogen. (Copper, fine granular Mallinckrodt 4649 or equivalent).

4.6 Procedure

Removal of sulfur using copper.

- 4.6.1 Concentrate the sample to exactly 1.0 mL or other known volume. Perform concentration using the techniques described in the appropriate 3500 series method.
 CAUTION: When the volume of solvent is reduced below 1 mL, semivolatile analytes may be lost.
- 4.6.2 If the sulfur concentration is such that crystallization occurs, centrifuge to settle the crystals, and carefully draw off the sample extract with a disposable pipet leaving the excess sulfur in the concentration vessel. Transfer 1.0 mL of the extract to a calibrated centrifuge tube.
- 4.6.3 Add approximately 2 g of cleaned copper powder to the centrifuge tube. (The copper will fill the tube to approximately the 0.5 mL mark). Vigorously mix the extract and the copper powder for at least 1 min on the mechanical shaker. Allow the phases to separate.

4.6.4 Separate the extract from the copper by drawing off the extract with a disposable pipet and transfer to a clean and labeled GC ALS vial. The volume remaining still represents 1.0 mL of extract. NOTE: This separation is necessary to prevent further degradation of the pesticides.

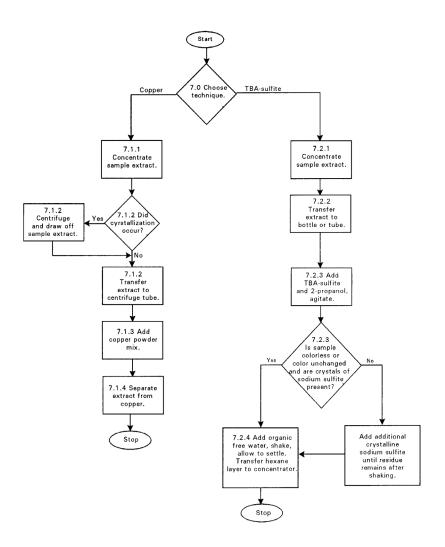
4.7 References

- 1. Goerlitz, D.F. and L.M. Law, Bulletin for Environmental Contamination and Toxicology, <u>6</u>, 9 (1971).
- 2. U.S. EPA Contract Laboratory Program, Statement of Work for Organic Analysis, Revision, July 1985.

Table 3 - Effect of copper on analyte recoveries

Analyte	Percent
	recovery with
	coppera
Aroclor 1254	104.26
Lindane	94.83
Heptachlor	5.39
Aldrin	93.29
Heptachlor epoxide	96.55
DDE	102.91
DDT	85.10
BHC	98.08
Dieldrin	94.90
Endrin	89.26
Chlorobenzilate	0.00
Malathion	0.00
Diazinon	0.00
Parathion	0.00
Ethion	0.00
Trithion	0.00

Percent recoveries cited are averages based on duplicate analyses for all compounds other than for Aldrin and BHC. For Aldrin, four and three determinations were averaged to obtain the result for copper. Recovery of BHC using copper is based on one analysis.





WASTE PROFILE FORM COVER SHEET

45282 APPROVED

waste Characteriz	ation information
Waste Stream ID:	45282
WPF ID (Legacy):	
Waste Stream Name:	ORGANIC SOLVENT FOR PCB EXTRACTION
Expiration Date:	12/18/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Chemical
Composition (other):	
EPA Codes:	D001 F002 F003
Waste Acceptance:	
EPA Form Code:	<u>W204</u>
	Organic Liquids: Concentrated halogenated/ non-halogenated solvent mixture
EPA Source Code:	G22

Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2020	100.00 L
2019	100.00 L
2018	100.00 L



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
45282	

Generator's Z Number	Waste Generator's Name (p	rint) WMC's Z f	Number	WMC's Name (pa	rint)	Generator's Phone		
342232	HUBER, DANIEL	HUBER, DANIEL 2084		MARTINEZ, PHILIP		5056672209		
Generator's Mail Stop	Waste Generating Group	Waste Stream Te	chnical Area	Building	Room	WMC Phone		
K484	C-CDE	59		000001	139	5056060818		
Waste Accumulation (che	eck only one)			□ Control Accus	mulation Area Site	No:		
☑ Satellite Accumulation A	Area Site No	D: <u>6538</u>		□ NM Special V		No:		
☐ Less-than-90 Days Stor	rage Area Site No):		☐ None of the A	bove Site	No:		
□TSDF	Site No):		☐ PCBs Storage	e Area Site	No:		
☐ Universal Waste Storag		D:		☐ Rad Staging	Area Site	No:		
☐ Used Oil for Recycle ER Use Only	Site inc):		☐ Rad Storage	Area Sile	No:		
☐ ER Site	SWMLI/AOC N	0						
☐ ER Site SWMU/AOC No Method of Characterization (check as many as apply)								
	, , , , , , , , , , , , , , , , , , , ,		Sample No:					
☐ Chemical/Physical Ana ☐ Radiological Analysis	nysis □ Attac		Sample No.					
☐ PCB Analysis	☐ Attac	ched S	Sample No:					
☑ Acceptable Knowledge				cedure, Waste Log s	heet when			
☑ Material Safety Data SI	heet (MSDS) ☑ Attac	ched	MS	DS				
Section 1 - Waste Prevent	ion/Minimization (answer a	l questions)						
Can hazard segregation, e	elimination, or material substi	tution be used?		Yes (<i>provide com</i>	nments) 🗹 N	lo		
Can any of the materials in	n the waste stream be recycle	ed or reused?] Yes (<i>provide con</i>	nments) 🗹 N	lo		
Has waste minimization be	een incorporated into procedu	ures or other proces	s controls? ✓	Í Yes		lo (provide comments)		
Can this waste be generat	ed outside a RCA?			Yes (<i>provide con</i>	nments) 🗆 N	lo ☑ N/A		
Comments:								
Section 2 - Chemical and I	Physical Information							
Waste Type (check only of		eck all that apply)	Waste Sou	rce (check only on	e) Waste M	latrix (check only one)		
☐ Unused/Unspent Chem			Waste Sou		Gas	,		
☑ Process Waste/Spent	☑ Organic		☐ Decon		□≤1.5 /	Atmospheres Pressure		
Chemical/Other	☑ Solvent (see inst			s Processing/Prod :h/Development/Te		Atmospheres Pressure		
Radiological Information	□ Degreaser (see i □ Dioxin	nstructions)	l —	ed Maintenance	Liquif	ied Compressed Gas		
Was Waste generated in a	I —			eeping - Routine	Liquid			
☐ Yes ☑ No	☐ Treated Hazardo	us Waste or Residu		anup - Routine	☐ Aque			
☑ Non-radioactive	□ No-Longer Conta			g - Routine Monito		Aqueous		
☐ Radioactive - Low Leve	Explosive Proces		☐ Other (d	escribe)		ended Solids/Aqueous		
☐ Radioactive - Transurar	nic ☐ Infectious/Medica ☐ Biological	31			│ ∐ Susp Aque	ended Solids/Non-		
Waste Destination (check	—— Damilia		Waste Sou	rce B	Solid	ous		
SWWS	´ │		□ Abateme			ler/Ash/Dust		
□ RLWTF	☐ Battery (see instr	ructions)		ction/Upgrades	□ Solid	el/Asil/Dust		
□RLWTP	Asbestos □ Friable		☐ Demoliti		☐ Sludg	ne.		
☐ TA-16/HE	□ Non-Friable		☐ Decon/□			rbed/Solidified Liquid		
□NTS	PCB Source Conc	entration	☐ Investigation ☐ Orphan/	ative Derived	☐ Debri	•		
Classified Information	□ PCB < 50 ppm			ation/Restoration	Matrix T	ype (check only one)		
Classified Information ☑ Unclassified	□ PCB >= 50 - < 50			ng (secondary)	ПНот	ogeneous		
☐ Classified/Sensitive	☐ PCB >= 500 ppm ☐ Hazardous Wast			duled Maintenance	9 1711-4	rogeneous		
	☐ Untreated Hazar		l m Honsey	eeping (non-routine anup (non-routine	e)	-g		
	☐ Commercial Solid	d Waste		roleum Tanks	'			
	☐ Other [Describe]		□ Petroleu					
			☐ Other (d	escribe)	Estimate	e Annual Volume (m³):		
	Other:		Other:			0.1000		
	1		1		1	0.1000		

Section 3 - Process and Waste Description

Process Description:

Solvent used for extraction of PCBs from santiary waste water.

Waste Description:
Solvent used for extraction of PCBs from santiary waste wate. Extraction insturment conditioning rinse; 20 ml Dichloromethane, 10ml Acetone, 20 ml methanol, 20ml water. Solvent cleaning-up / drying 20ml Dichloromethane. Sample clean up solvent; 5 ml hexane. All solvents will be free of PCBs, they are collected as samples. All solvents are either evaported off the sample for concentration or used to wash sample glassware following PCBs

Section 4 - Characteristics									
Ignitability (check only one)	Corrosi	vity (che	ck only o	ne) (pH)	Reactivity (check as many as apply)	Boiling F	Point (check only one)		
☑ < 73 F (< 22.8 C)	□<= 2.0			, ,	☐ RCRA Unstable		□ <= 95 F (<= 35 C)		
□ 73 - 99 F (22.8 - 37.2 C)				☐ Water Reactive	☑ >95 F (> 35 C)				
□ 100 - 139 F (37.8 - 59.4 C)				☐ Cyanide Bearing		pplicable			
□ 140 - 200 F (60.0 - 99.3 C)	6.1 - 9				☐ Sulfide Bearing	- 110171	ppilodbie		
□ > 200 (> 99.3 C)	□ 0.1 □ 9.1 -				☐ Pyrophoric				
	□ 9.1 - □ >= 12				☐ Shock Sensitive				
☐ EPA Ignitable - Non-liquid			04.	-1					
☐ DOT Flammable Gas		d Corrosiv	e to Ste	еі	Explosive [Specify DOT Div.]				
☐ DOT Oxidizer	☑ Non-a	aqueous			☑ Non-Reactive				
☐ Not Ignitable									
		haracteriz	otion Mot	hod	Concentration of Contaminant	•	T		
		ilaracteriz	ation we	None or	Contaminant present at	<u> </u>	1		
Identify for all contaminants listed	AK	TCLP	Total	Non-detect			Regulatory Limit		
Toxicity Characteristic Metals	7			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(10,000 ppm = 1%)				
Arsenic	$\overline{\mathbf{A}}$			\square	to	ppm	5.0 ppm		
Barium	<u> </u>			<u> </u>	to	ppm	100.0 ppm		
Cadmium	<u> </u>			<u> </u>	to	ppm	1.0 ppm		
Chromium	Ø	i ii		<u> </u>	to	ppm	5.0 ppm		
Lead	Ø			<u> </u>	to	ppm	5.0 ppm		
Mercury	Ø			<u> </u>	to	ppm	0.2 ppm		
Selenium	Ø	H		<u> </u>	to	ppm	1.0 ppm		
Silver	<u> </u>		Н	$\overline{\mathbf{Z}}$	to	ppm	5.0 ppm		
Toxicity Characteristic Organics			_ ⊔		10	ррии	3.0 ppm		
Benzene	$\overline{\mathbf{A}}$			V	to	ppm	0.5 ppm		
Carbon tetrachloride	<u> </u>			<u> </u>	to	• •	0.5 ppm		
Chlorobenzene	<u> </u>	-	 	<u> </u>	to	ppm			
					to	ppm			
Chloroform		H		<u> </u>		ppm	6.0 ppm		
Cresol	<u> </u>					ppm	200.0 ppm		
p-Cresol	<u> </u>			<u> </u>	to	ppm	200.0 ppm		
m-Cresol	☑			<u> </u>	to	ppm	200.0 ppm		
o-Cresol	☑			<u> </u>	to	ppm	200.0 ppm		
1,4-Dichlorobenzene	☑				to	ppm	7.5 ppm		
1,2-Dichloroethane	Ø			✓		ppm	0.5 ppm		
1,1-Dichloroethylene	☑				to	ppm	0.7 ppm		
2,4-Dinitrotoluene	☑			☑	to	ppm	0.13 ppm		
Hexachlorobenzene	Ø			☑	to	ppm	0.13 ppm		
Hexachlorobutadiene	Ø			☑	to	ppm	0.5 ppm		
Hexachloroethane	☑			✓	to	ppm	3.0 ppm		
Methyl ethyl ketone	\square			\square	to	ppm	200.0 ppm		
Nitrobenzene	Ø			\square	to	ppm	2.0 ppm		
Pentachlorophenol	$\overline{\mathbf{A}}$			\square	to	ppm	100.0 ppm		
Pyridine	Ø			\square	to	ppm	5.0 ppm		
Tetrachloroethylene	\square			\square	to	ppm	0.7 ppm		
Trichloroethylene	\square			\square	to	ppm	0.5 ppm		
2,4,6-Trichlorophenol	Ø			V	to	ppm	2.0 ppm		
2,4,5-Trichlorophenol	\square				to	ppm	400.0 ppm		
Vinyl chloride	Ø			V	to	ppm	0.2 ppm		
Herbicides and Pesticides					1				
Chlordane	$\overline{\mathbf{V}}$			$\overline{\mathbf{A}}$	to	ppm	0.03 ppm		
2,4-D	Ø			Ø		ppm	10.0 ppm		
Endrin	Ø			<u> </u>	to	ppm	0.02 ppm		
Heptachlor (& its epoxide)	Ø			<u> </u>		ppm	0.008 ppm		
Lindane (gamma-BHC)	Ø			Ø	to	ppm	0.4 ppm		
Methoxychlor	Ø			<u> </u>		ppm	10.0 ppm		
2,4,5-TP (Silvex)	Ø			V	to	ppm	1.0 ppm		
Toxaphene	Ø			Ø	to	ppm	0.5 ppm		
. o.capitorio						1 10 111	0.0 FF		

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppn	n) Maximum (ppm)
67-64-1	Acetone	80000	to 140000
75-09-2	Methylene chloride		to 460000
110-54-3	Hexane		to 70000
67-56-1 7732-18-5	Methanol Water		to 230000 to 230000
1132-10-3	water	190000	to 230000
	Total of max. ranges of this section and page 2		113.00 in %
	Additional Information		
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form, pro	vide it below
Section 6 - Work Cor	ntrol Documentation		
Do the procedures for	or this process cover how to manage this waste?	mments)	
· ·			romayal of
waste to/from contai	or this process address controls to prevent changes to waste constituents and concentration ners? ☑ Yes ☐ No (provide comments)	is or addition or	removal of
	The interest of the provide comments)		
Comments:			
Section 7 - Packagin	g and Storage Control		
Describe how the wa	ste will be packaged in according to the applicable WAC.		
	ccordance with P409-1. Waste will be accumulated in glass bottles or Nalgene plastic conta		
polypropylene drums	which are compatible with the specified waste streams. (i.e., lab-packs). All material inder	ntified in the com	postion are
	nanagement controls that will be used for this waste stream: (check all that apply)		
	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Other	er (describe)	
L	rtification Statements	()	
	meet WAC attachment for: HAZ		
	ds exception/exemption for treatment, storage, or disposal.		
		inciple Associate	Director for
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Pri s [PADWP] for assistance.)	incipie Associate	Director for
	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certif	v that the waste	characterization
	m is correct and that it meets the requirements of the applicable waste acceptance criteria.		
	regulatory agencies and that there are significant penalties for submitting false information,	including the po	ssibility of fines and
imprisonment for know	wing violations.		
Signature: WILLIAN	M HOLLIS (113868) Date: 12/18/18 09:47 AI	М	
	Approval: I have reviewed this form and any associated attachments and the characteriza		
	urate. I certify, to the best of my knowledge, that the waste characterization information pro	vided by the was	te generator meets
the requirements of the	ne applicable vVAC.		
Signature: PHILIP I	MARTINEZ (208498) Date: 12/18/18 09:56 AI	М	
	e reviewed this form and any associated attachments and the characterization information		
	the best of my knowledge, that the waste characterization information provided by the wast	e generator mee	ts the requirements of
the applicable WAC.			
Signature: ANDY E	LICIO (118692) Date: 12/18/18 09:58 AI	M	

		Att	achment 4 - LDR	and UHC					
Iden	Identify category and presence of any constituents listed below (equal to or above limit).								
	Non-Wastewater/Wastewater Category (check only one) ☑ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)] ☐ Lab Pack [40 CFR 268.2(f)] Sign Certification #1								
	Non Wastewater			☐ Lab Pack [40 CFR 268.2	2(f)] Sign Certification #1				
	nerator Requirements:								
	☐ This shipment contains hazardous waste contaminated soil that does not meet treatment standards Sign Certification #2								
	This shipment contains untreated hazardous d				(No certification)				
	Hazardous wastes (except soil) meeting treatm	nent standard	ds at point of gene	ration	Sign Certification #3				
l	Hazardous wastes contaminated soil meeting t	reatment sta	indards at point of	generation	Sign Certification #4				
l	F or Generator Treatment:								
	TSDF treated hazardous debris meeting the a				Sign Certification #5				
	Generator treated hazardous debris meeting the Hazardous wastes contaminated soil treated to			ards of 40 CFR 268.45	Sign Certification #6 Sign Certification #7				
	Wastes or residues from characteristic hazard			reatment standards and UTS	Sign Certification #8				
	Wastes or residues from characteristic hazard				Sign Certification #9				
	Other TSDF wastes meeting the more stringer				Sign Certification #10				
\Box	Other generator wastes meeting the more string				Sign Certification #11				
	(Check the applicable underlying cons			ardous Constituents	aracteratic wastes only)				
_ ,	, ,,			in levels for boot through bo45 cm	aracterstic wastes orny)				
	No Underlying Hazardous Constituents in th	iis waste sti	wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS				
	Organic Constituents	CASRN			(mg/kg unless noted otherwise)				
	Acenaphthene	83-32-9		3.4	34.0				
	Acenaphthylene	208-96-8	0.000	3.4	34.0				
<u> </u>	Acetone	67-64-1		160.0	1600.0				
	Acetonitrile	75-05-8		38.0	380.0				
	Acetophenone	98-86-2		9.7	97.0				
	2-Acetylaminofluorene	53-96-3		140.0	1400.0				
	Acrolein	107-02-8		N/A	N/A				
	Acrylamide	79-06-1	19.0	23.0	230.0				
	Acrylonitrile	107-13-1	0.24	84.0	840.0				
	Aldicarb sulfone	1646-88-4	-	0.28	2.8				
	Aldrin	309-00-2		0.066	0.66				
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A				
	Aniline	62-53-3		14.0	140.0				
	o-Anisidine	90-04-0		0.66	6.6				
	Anthracene	120-12-7		3.4	34.0				
	Aramite	140-57-8		N/A	N/A				
	alpha-BHC	319-84-6		0.066	0.66				
	beta-BHC	319-85-7		0.066	0.66				
	delta-BHC	319-86-8		0.066	0.66				
	Barban	101-27-9		1.4	14.0				
	Bendiocarb	22781-23-3		1.4	14.0				
	Benomyl	17804-35-2		1.4	14.0				
	Benz[a]anthracene	56-55-3		3.4	34.0				
	Benzal chloride	98-87-3		6.0	60.0				
	Benzene	71-43-2		10.0	100.0				
	Benzo(b)fluoranthene	205-99-2		6.8	68.0				
	Benzo[a]pyrene	50-32-8		3.4	34.0				
	Benzo[ghi]perylene	191-24-2		1.8	18.0				
	Benzo[k]fluoranthene	207-08-9		6.8	68.0				
	Bis(2-Chloroethoxy)methane	111-91-1		7.2	72.0				
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0				
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0				
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0				
	Bromodichloromethane	75-27-4		15.0	150.0				
	Bromomethane	74-83-9		15.0	150.0				
	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0				
	n-Butyl alchohol	71-36-3		2.6	26.0				

□ Butylate

□ Carbaryl

□ Butyl benzyl phthalate

280.0

14.0

1.4

28.0

1.4

0.14

0.017

0.042

0.006

85-68-7

63-25-2

2008-41-5

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1		15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3		30.0	300.0
	2-Chloronaphthalene	91-58-7		5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1		30.0	300.0
	Chrysene	218-01-9		3.4	34.0
H	p-Cresidine	120-71-8		0.66	6.6
	m-Cresol	108-39-4		5.6	
	o-Cresol	95-48-7		5.6	56.0
					56.0
<u></u>	p-Cresol	106-44-5		5.6	56.0
<u>_</u>	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*		30.0	300.0
_	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1		0.75	7.5
	2,4-D	94-75-7		10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6	0.0039	0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7		14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
_	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-02-0		18.0	180.0
	Dieldrin	60-57-1		0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
Form		04-00-2	U.Z		280.U

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3		28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7		N/A	N/A
	Disulfoton	298-04-4		6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4		1.4	14.0
	Endosulfan I	959-98-8		0.066	0.66
	Endosulfan II	33213-65-9		0.13	1.3
	Endosulfan sulfate	1031-07-8		0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
	Ethyl acetate	141-78-6		33.0	330.0
	Ethyl benzene	100-41-4		10.0	100.0
	Ethyl ether	60-29-7		160.0	1600.0
	Ethyl methacrylate	97-63-2		160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8		0.066	0.66
	Heptachlor epoxide	1024-57-3		0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
	Hexachlorobenzene Hexachlorobutadiene	118-74-1		10.0	100.0
		87-68-3 77-47-4		5.6	56.0
	Hexachlorocyclopentadiene Hexachloroethane			2.4 30.0	24.0
		67-72-1 1888-71-7	0.055		300.0
	Hexachloropropene			30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8 55684-94-1	0.000063 0.000063	0.001 0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans) Indeno[1,2,3-cd]pyrene	193-39-5		3.4	0.01 34.0
	lodomethane	74-88-4		65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.021	2.6	26.0
	Kepone	143-50-0		0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
<u> </u>	Methanol	67-56-1		0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
	13.46 (WCATS PA)		inted 2/4/2021 11.	•	Page 7 of 1

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
V	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3	0.059	5.6	56.0
	2-Naphthylamine	91-59-8	0.52	N/A	N/A
	5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5	0.028	13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0	0.056	0.28	2.8
	Parathion	56-38-2	0.014	4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
	Pentachlorobenzene	608-93-5	0.055	10.0	100.0
	Pentachloroethane	76-01-7	0.055	6.0	60.0
	Pentachloronitrobenzene	82-68-8	0.055	4.8	48.0
	Pentachlorophenol	87-86-5	0.089	7.4	74.0
	Phenacetin	62-44-2	0.081	16.0	160.0
	Phenanthrene	85-01-8	0.059	5.6	56.0
	Phenol	108-95-2	0.039	6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
	o-Phenylenediamine	95-54-5	N/A	N/A	N/A
	Phorate	298-02-2		4.6	46.0
	Phthalic acid	100-21-0		28.0	280.0
	Phthalic anhydride	85-44-9		28.0	280.0
	Physostigmine	57-47-6		1.4	14.0
	Physostigmine salicylate	57-64-7	0.056	1.4	14.0
	Promecarb	2631-37-0	0.056	1.4	14.0
	Pronamide	23950-58-5	0.093	1.5	15.0
	Propanenitrile	107-12-0	0.24	360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9	0.042	1.4	14.0
	Pyrene	129-00-0	0.067	8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
	1346 (WCATS - R4)		inted 2/4/2021 11:		Page 8 of 10

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

45283 APPROVED

	Waste	Characterization	Information
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Waste Stream ID:	45283
WPF ID (Legacy):	
Waste Stream Name:	SULFURIC ACID FOR PCB EXTRACTION
Expiration Date:	09/05/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Aqueous Solutions
Composition (other):	acidic
EPA Codes:	D002
Waste Acceptance:	
EPA Form Code:	W103
	Inorganic Liquids: Spent concentrated acid (5% or more)
EPA Source Code:	G22
	Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2021	5.00 L
2020	5.00 L
2019	5.00 L



WASTE PROFILE FORM

Referenc	e Number				
WCATS ID	Legacy WPF ID				
45283					

Generator's Z Number	Waste Generator's Name (print)	WMC's Z Number	WMC's Name (p		Generator's Phone				
342232	HUBER, DANIEL	208498	MARTINE	5056672209					
Generator's Mail Stop	Waste Generating Group Waste	aste Stream Technical A	Area Building	Room	WMC Phone				
K484	C-CDE	59	000001	139	5056060818				
Waste Accumulation (che	ck only one)		☐ Central Accur	mulation Area Site	No:				
☑ Satellite Accumulation	rea Site No: 6	538	□ NM Special V		No:				
☐ Less-than-90 Days Sto	age Area Site No:		□ None of the A	bove Site	No:				
□TSDF	Site No:		☐ PCBs Storag	e Area Site	No:				
☐ Universal Waste Storag	e Area Site No:		☐ Rad Staging	Area Site	No:				
☐ Used Oil for Recycle	Site No:		☐ Rad Storage	Area Site	No:				
ER Use Only									
☐ ER Site	SWMU/AOC No								
	on (check as many as apply)								
	☐ Chemical/Physical Analysis ☐ Attached Sample No:								
☐ Radiological Analysis	☐ Attached ☐ Attached	Sample N Sample N							
☐ PCB Analysis ☐ Acceptable Knowledge	_	Documentation N							
✓ Material Safety Data S		Documentation	MSDS						
= Material Salety Bata S									
Section 1 - Waste Prevent	on/Minimization (answer all que	estions)							
	limination, or material substitution		☐ Yes (provide con	nments) 🗹 N	0				
	the waste stream be recycled or		☐ Yes (provide con						
· · · · · · · · · · · · · · · · · · ·	en incorporated into procedures		V	/	o (provide comments)				
Can this waste be general	<u> </u>	<u>'</u>	☐ Yes (provide con						
Comments:	-		_ : == (p:=:::::= :::::::::::::::::::::::						
Section 2 - Chemical and		all that apply) Mast	Source (about anti-or	Note M	latrix (abook anly ana)				
Waste Type (check only o	, I • • • • •		e Source (check only on e Source A	Gas	atrix (check only one)				
☐ Unused/Unspent Chem ☑ Process Waste/Spent	cai ☐ Inorganic ☐ Organic	□ De			Atmospheres Pressure				
Chemical/Other	☐ Solvent (see instruction		aterials Processing/Prod		Atmospheres Pressure				
CHOINICAL CATO	□ Degreaser (see instru		Research/Development/Testing						
Radiological Information	☐ Dioxin `		☐ Scheduled Maintenance						
Was Waste generated in a			indusereeping - Routine						
☐ Yes ☑ No	☐ Treated Hazardous W								
☑ Non-radioactive	□ No-Longer Contained		☐ Sampling - Routine Monitoring ☐ Non-Aqueous						
☐ Radioactive - Low Leve	☐ Explosive Process ☐ Infectious/Medical		☐ Other (describe) ☐ Suspended Solids/Aqu						
☐ Radioactive - Transura	ic			□ Suspe	ended Solids/Non-				
Wasta Destination (sheet	□ Domillium	Wast	e Source B		Jus				
Waste Destination (check	☐ Empty Container (see		□ Ab standard						
SWWS	☐ Battery (see instruction		Construction/Ungrades						
RLWTF	Asbestos		emolition	Solid					
□ RLWTP	☐ Friable		econ/Decom	□Sludg					
☐ TA-16/HE	☐ Non-Friable PCB Source Concentra	□ In	vestigative Derived		bed/Solidified Liquid				
□NTS	PCB Source Concentra	🗆 0	rphan/Legacy	☐ Debri					
Classified Information	□ PCB >= 50 - < 500 pp		emediation/Restoration	Matrix T	ype (check only one)				
☑ Unclassified	□ PCB >= 500 ppm	🖳 📉	epacking (secondary) nscheduled Maintenance	Ų Homo	geneous				
☐ Classified/Sensitive	□ Hazardaya Wasta Ca		ousekeeping (non-routin		ogeneous				
I	<u> </u>								
	☐ Untreated Hazardous	Debris □ Sr	oill Cleanup (non-routine)					
	☐ Untreated Hazardous ☐ Commercial Solid Wa	ste Sp	oill Cleanup (non-routine on-Petroleum Tanks)					
	☐ Untreated Hazardous	Debris ☐ Sp ste ☐ No	on-Petroleum Tanks etroleum Tanks						
	☐ Untreated Hazardous ☐ Commercial Solid Wa	Debris ☐ Sp ste ☐ No	on-Petroleum Tanks		e Annual Volume (m³):				

Section 3 - Process and Waste Description									
Process Description: Sulfuric Acid used for extraction cleanup of PCBs samples from santiary waste water.									
Waste Description: 50:50 concentrated sulfuric acid to water									
Parelland A Observatoristics									
Section 4 - Characteristics	Correcti	vity (ched	als anhs a	na) (nl.l)	Parativity (about as many as apply	Dailing F	Daint (abook only	(000)	
Ignitability (check only one) ☐ < 73 F (< 22.8 C)		• (ck offig of	<i>ne)</i> (p⊓)	Reactivity (check as many as apply, ☐ RCRA Unstable		Point (check onl) 5 F (<= 35 C)	/ one)	
☐ 73 - 99 F (22.8 - 37.2 C)	2.1 -	-			☐ Water Reactive		(\= 35 C)		
□ 100 - 139 F (37.8 - 59.4 C)	4.1 - 0				☐ Cyanide Bearing		pplicable		
□ 140 - 200 F (60.0 - 99.3 C)	□ 6.1 - 9	9.0			☐ Sulfide Bearing				
□ > 200 (> 99.3 C)	9.1 -				☐ Pyrophoric				
☐ EPA Ignitable - Non-liquid	□ >= 12				☐ Shock Sensitive				
□ DOT Flammable Gas □ DOT Oxidizer	□ Liquid □ Non-a	d Corrosiv	e to Stee	el	☐ Explosive [Specify DOT Div.] ☑ Non-Reactive				
☑ Not Ignitable	□ NOII-a	aqueous			L Non-Reactive				
— Not ignitable									
		haracteriz	ation Mot	hod	Concentration of Contaminan	te	1		
			ation we	None or	Contaminant present at		1		
Identify for all contaminants listed	AK	TCLP	Total	Non-detect	Minimum Maxiumum		Regulatory	Limit	
Toxicity Characteristic Metals Arsenic	$\overline{\mathbf{A}}$			\square	(10,000 ppm = 1%) to	ppm	5.0	ppm	
Barium	Ø			Ø	to	ppm	100.0		
Cadmium	$\overline{\Delta}$			Ø	to	ppm	1.0	ppm	
Chromium	☑			☑	to	ppm		ppm	
Lead	<u> </u>			<u> </u>	to	ppm		ppm	
Mercury Selenium	<u> </u>			<u> </u>	to to	ppm ppm		ppm ppm	
Silver	<u>a</u>	H	H	Ø	to	ppm		ppm	
Toxicity Characteristic Organics									
Benzene	☑			☑	to	ppm		ppm	
Carbon tetrachloride	<u> </u>			<u> </u>	to to	ppm		ppm	
Chlorobenzene Chloroform	<u> </u>			<u> </u>	to	ppm ppm	100.0	ppm	
Cresol	Ø			Ø	to	ppm		ppm	
p-Cresol	V			Ø	to	ppm	200.0		
m-Cresol	☑			☑	to	ppm	200.0	• •	
o-Cresol	<u> </u>			<u> </u>	to	ppm		ppm	
1,4-Dichlorobenzene 1,2-Dichloroethane	<u> </u>			<u> </u>	to to	ppm ppm		ppm ppm	
1,1-Dichloroethylene	V			<u> </u>	to	ppm		ppm	
2,4-Dinitrotoluene	Ø			$\overline{\checkmark}$	to	ppm	0.13		
Hexachlorobenzene	Ø			Ø	to	ppm	0.13		
Hexachlorobutadiene Hexachloroethane	<u> </u>			<u> </u>	to to	ppm		ppm	
Methyl ethyl ketone	<u> </u>	-		<u> </u>	to	ppm ppm	200.0		
Nitrobenzene	Ø			Ø	to	ppm		ppm	
Pentachlorophenol	V			$\overline{\checkmark}$	to	ppm	100.0		
Pyridine	☑			☑	to	ppm		ppm	
Tetrachloroethylene	Ø			Ø	to	ppm		ppm	
Trichloroethylene 2,4,6-Trichlorophenol	<u> </u>			<u> </u>	to to	ppm ppm		ppm ppm	
2,4,5-Trichlorophenol	<u> </u>		-	<u> </u>	to	ppm	400.0		
Vinyl chloride	Ø			Ø	to	ppm		ppm	
Herbicides and Pesticides									
Chlordane	Ø			<u> </u>	to	ppm	0.03		
2,4-D Endrin	<u> </u>			Image: section of the	to to	ppm	10.0 0.02		
Heptachlor (& its epoxide)	<u> </u>			<u> </u>	to	ppm ppm	0.02		
Lindane (gamma-BHC)	<u> </u>		H	V	to	ppm		ppm	
Methoxychlor	$\overline{\mathbf{V}}$			$\overline{\checkmark}$	to	ppm	10.0	ppm	
2,4,5-TP (Silvex)	<u> </u>			<u> </u>	to	ppm		ppm	
Toxaphene	$\overline{\checkmark}$			$\overline{\mathbf{A}}$	to	ppm	0.5	ppm	

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppn	n) Maximum (ppm)				
7664-93-9	Sulfuric acid		to 990000				
7732-18-5	Water	10000	to 200000				
	Total of max. ranges of this section and page 2		119.00 in %				
	Additional Information						
	on is available on the chemical, physical, or radiological character of the waste not covere						
Although used to cle phase.	an up organic extractions of PCB samples all PCBs will reside in the orgainic phase and r	o PCBs will be in	the aqueous				
priase.							
Waste is strongly aci	idic, and will not be mixed with caustics, oxidizers, or other incompatible wastes.						
Section 6 - Work Cor	ntrol Documentation						
Do the procedures for	or this process cover how to manage this waste?	omments)					
Do the procedures for waste to/from contain	or this process address controls to prevent changes to waste constituents and concentrations of the control of	ons or addition or	removal of				
	ners? ☑ Yes ☐ No (provide comments)						
Comments:							
Section 7 - Packagin	g and Storage Control						
	ste will be packaged in according to the applicable WAC.						
Waste will be accumi	ulated in glass bottles or Nalgene plastic containers, both of which are compatible with the ainers (i.e., lab-packed)	waste, then over	packed into DOT				
	nanagement controls that will be used for this waste stream: (check all that apply)						
1	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Ot	her (describe)					
	-	ici (describe)					
Section 8 - Waste Certification Statements Waste appears to meet WAC attachment for: HAZ							
- ''	ds exception/exemption for treatment, storage, or disposal.						
		Principle Associate	Director for				
☐ Waste does not meet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Principle Associate Director for Weapons Programs [PADWP] for assistance.)							
Waste Generator Certification: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the waste characterization information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. Lunderstand that this information will							
information on this form is correct and that it meets the requirements of the applicable waste acceptance criteria. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and							
imprisonment for know	wing violations.						
Signature: <u>DANIEL</u>	HUBER (342232) Date: 09/06/19 07:59 /	AM .					
Waste Management	Approval: I have reviewed this form and any associated attachments and the characterize	ation information	nrovided appears to				
	urate. I certify, to the best of my knowledge, that the waste characterization information pr						
Signature: PHILIP I	MARTINEZ (208498) Date: 09/12/19 10:39 A	<u>4</u> <i>M</i>					
RCRA Review: I have	e reviewed this form and any associated attachments and the characterization information	provided appears	s to be complete and				
	the best of my knowledge, that the waste characterization information provided by the wa						
Signature: ROBER	T MOLTER (239137) Date: 09/12/19 10:44 A	AM .					

Attachment 4 - LDR and UHC

	Attachinent 4 - LDK and	u onc	
Identify category and prese	nce of any constituents listed below (equal to or above lir	mit).	
Non-Wastewater/Wastewa	ater Category (check only one)	•	
☐ Non Wastewater	☑ Wastewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1
Notifications and Certifications	ations - Check the appilcable boxes	-	
Generator Requirements:			
☐ This shipment contains	hazardous waste contaminated soil that does not meet tr	reatment standards	Sign Certification #2
☐ This shipment contains	untreated hazardous debris to be treated to 40 CFR 268.	.45 treatment standards	(No certification)
☐ Hazardous wastes (exc	ept soil) meeting treatment standards at point of generati	on	Sign Certification #3
☐ Hazardous wastes cont	Sign Certification #4		
TSDF or Generator Treatr	nent:		
☐ TSDF treated hazardou	us debris meeting the alternative treatment standards of 4	40 CFR 268.45	Sign Certification #5
☐ Generator treated haza	ardous debris meeting the alternative treatment standards	s of 40 CFR 268.45	Sign Certification #6
☐ Hazardous wastes con	taminated soil treated to 40 CFR 268.49		Sign Certification #7
☐ Wastes or residues from	m characteristic hazardous waste treatment meeting trea	tment standards and UTS	Sign Certification #8
☐ Wastes or residues from	m characteristic hazardous waste treatment not meeting	UTS	Sign Certification #9
☐ Other TSDF wastes me	eeting the more stringent 40 CFR 268.40 treatment stand	lards to be land disposed	Sign Certification #10
☐ Other generator wastes	s meeting the more stringent 40 CFR 268.40 treatment st	andards to be land disposed	Sign Certification #11
	Notification of Underlying Hazard	lous Constituents	

(Check the applicable underlying constituents above the concentration levels for D001 through D043 characterstic wastes only)

☑ No Underlying Hazardous Constituents in this waste stream.

⊻ /	lo Underlying Hazardous Constituents in t	ilis waste sti	wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
	Organic Constituents	CASRN			(mg/kg unless noted otherwise)
	Acenaphthene	83-32-9		3.4	34.0
	Acenaphthylene	208-96-8		3.4	34.0
	Acetone	67-64-1		160.0	1600.0
$\overline{}$	Acetonitrile	75-05-8		38.0	380.0
	Acetophenone	98-86-2		9.7	97.0
	2-Acetylaminofluorene	53-96-3		140.0	1400.0
	Acrolein	107-02-8		N/A	N/A
	Acrylamide	79-06-1		23.0	230.0
	Acrylonitrile	107-13-1		84.0	840.0
	Aldicarb sulfone	1646-88-4		0.28	2.8
	Aldrin	309-00-2		0.066	0.66
	4-Aminobiphenyl	92-67-1		N/A	N/A
	Aniline	62-53-3		14.0	140.0
_	o-Anisidine	90-04-0		0.66	6.6
	Anthracene	120-12-7		3.4	34.0
	Aramite	140-57-8		N/A	N/A
	alpha-BHC	319-84-6		0.066	0.66
_	beta-BHC	319-84-0		0.066	
	delta-BHC	319-85-7		0.066	0.66
				1.4	0.66
	Barban	101-27-9			14.0
=	Bendiocarb	22781-23-3		1.4	14.0
	Benomyl	17804-35-2		1.4	14.0
	Benz[a]anthracene	56-55-3		3.4	34.0
	Benzal chloride	98-87-3		6.0	60.0
	Benzene	71-43-2		10.0	100.0
	Benzo(b)fluoranthene	205-99-2		6.8	68.0
	Benzo[a]pyrene	50-32-8		3.4	34.0
	Benzo[ghi]perylene	191-24-2		1.8	18.0
	Benzo[k]fluoranthene	207-08-9		6.8	68.0
	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4		6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9		7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7		28.0	280.0
	Bromodichloromethane	75-27-4		15.0	150.0
	Bromomethane	74-83-9		15.0	150.0
	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0
	n-Butyl alchohol	71-36-3		2.6	26.0
<u></u>	Butyl benzyl phthalate	85-68-7		28.0	280.0
	Butylate	2008-41-5		1.4	14.0
	Carbaryl	63-25-2	0.006	0.14	1.4

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8	0.044	5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.039	0.66	6.6
	m-Cresol	108-39-4	0.01	5.6	56.0
			0.77	5.6	
_	o-Cresol	95-48-7			56.0
	p-Cresol	106-44-5	0.77	5.6	56.0
_	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5	1.2	590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7	0.72	10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
	p,p'-DDD	72-54-8	0.023	0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
무	p,p'-DDE	72-55-9	0.031	0.087	0.87
	o,p'-DDT	789-02-6		0.087	0.87
	p,p'-DDT	50-29-3	0.0039	0.087	0.87
	Di-n-butyl phthalate	84-74-2		28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
므	Dibenz[a,h]anthracene	53-70-3		8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4		N/A	N/A
_	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
므	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7		6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8	0.23	7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
	2,6-Dichlorophenol	87-65-0	0.044	14.0	140.0
	1,2-Dichloropropane	78-87-5	0.85	18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6	0.036	18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1	0.017	0.13	1.3
	Diethyl phthalate	84-66-2	0.2	28.0	280.0
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Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Dimethyl phthalate	131-11-3		28.0	280.0
p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
Dinoseb	88-85-7	0.066	2.5	25.0
1,4-Dioxane	123-91-1	12.0	170.0	1700.0
Diphenylamine	122-39-4	0.92	13.0	130.0
1,2-Diphenylhydrazine	122-66-7		N/A	N/A
Disulfoton	298-04-4		6.2	62.0
\ \ /	NCATS-001	0.028	28.0	280.0
EPTC	759-94-4		1.4	14.0
Endosulfan I	959-98-8		0.066	0.66
Endosulfan II	33213-65-9		0.13	1.3
Endosulfan sulfate	1031-07-8		0.13	1.3
Endrin	72-20-8		0.13	1.3
Endrin aldehyde	7421-93-4		0.13	1.3
Ethyl acetate	141-78-6		33.0	330.0
Ethyl benzene	100-41-4		10.0	100.0
Ethyl ether	60-29-7		160.0	1600.0
Ethyl methacrylate	97-63-2		160.0	1600.0
Ethylene oxide	75-21-8		N/A	N/A
Famphur	52-85-7		15.0	150.0
Fluoranthene	206-44-0		3.4	34.0
Fluorene	86-73-7		3.4	34.0
Fluoride	16984-48-8		N/A	N/A
Formetanate hydrochloride	23422-53-9		1.4	14.0
Heptachlor (& its epoxide)	76-44-8 1024-57-3		0.066 0.066	0.66
Heptachlor epoxide 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9		0.0025	0.66 0.025
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7		0.0025	0.025
Hexachlorobenzene	118-74-1		10.0	100.0
Hexachlorobutadiene	87-68-3		5.6	56.0
Hexachlorocyclopentadiene	77-47-4		2.4	24.0
Hexachloroethane	67-72-1	0.055	30.0	300.0
Hexachloropropene	1888-71-7		30.0	300.0
HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	0.01
HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063	0.001	0.01
Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
Iodomethane	74-88-4		65.0	650.0
Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
Isodrin	465-73-6		0.066	0.66
Isosafrole	120-58-1	0.081	2.6	26.0
Kepone	143-50-0	0.0011	0.13	1.3
Lindane (gamma-BHC)	58-89-9		0.066	0.66
Mercury (Retort Residues)	7439-97-6*	N/A	0.2	2.0
Methacrylonitrile	126-98-7	0.24	84.0	840.0
Methanol	67-56-1	5.6	0.75	7.5
Methapyrilene	91-80-5	0.081	1.5	15.0
Methiocarb	2032-65-7	0.056	1.4	14.0
Methomyl	16752-77-5	0.028	0.14	1.4
Methoxychlor	72-43-5	0.25	0.18	1.8
Methyl ethyl ketone	78-93-3	0.28	36.0	360.0
Methyl isobutyl ketone	108-10-1	0.14	33.0	330.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8	0.32	28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6	0.028	28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5	0.028	13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	0.000063	0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063	0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2		1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8		4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8	0.059	5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0	0.055	28.0	280.0
Phthalic anhydride	85-44-9		28.0	280.0
Physostigmine	57-47-6		1.4	14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5	0.093	1.5	15.0
Propanenitrile	107-12-0		360.0	3600.0
Propham	122-42-9		1.4	14.0
Propoxur	114-26-1	0.056	1.4	14.0
Prosulfocarb	52888-80-9	0.042	1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0
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Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6		0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

45286 APPROVED

Waste Characterization	Information
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Waste Stream ID:	45286
WPF ID (Legacy):	
Waste Stream Name:	SOLID WASTE FROM PCB COLUMN CLEANUP
Expiration Date:	09/11/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Other [Describe]
Composition (other):	Silica Gel;Florisil
EPA Codes:	F002
Waste Acceptance:	
EPA Form Code:	W319
	Inorganic Solids: Other inorganic solids (specify in comments)
EPA Source Code:	G22
	Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates

YEAR	VOLUME
2022	4.00 L
2021	4.00 L
2020	4.00 L
2019	4.00 L



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
45286	

Generator's Z Number	Waste Generator's Name (pr	int) WMC's Z Ni	umber	WMC's Name (pr	rint)	Generator's Phone
342232	HUBER, DANIEL	208	3498	MARTINE	Z, PHILIP	5056672209
Generator's Mail Stop	Waste Generating Group	Waste Stream Tec	hnical Area	Building	Room	WMC Phone
K484	C-CDE	59		000001	119	5056060818
Waste Accumulation (che	eck only one)			□ Central Accur	mulation Area Site	No:
☑ Satellite Accumulation A	Area Site No:	6801		□ NM Special W		No:
☐ Less-than-90 Days Stor	rage Area Site No:			☐ None of the A	bove Site	No:
□TSDF	Site No:			☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag				☐ Rad Staging /	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site No.			☐ Rad Storage	Area Sile	No:
☐ ER Site	SWMLI/AOC No)				
	on (check as many as apply)	<u>'. </u>				
	(, , , , , , , , , , , , , , , , , , ,	and Sa	ample No:			
☐ Radiological Analysis	□ Chemical/Physical Analysis □ Attached Sample No: □ Radiological Analysis □ Attached Sample No:					
☐ PCB Analysis	□Attacl	ned Sa	ample No:			
☑ Acceptable Knowledge				cedure, Waste log sh	neet when	
☑ Material Safety Data SI	heet (MSDS) ☑ Attacl	ned	MS	DS		
Section 1 - Waste Prevent	ion/Minimization (answer all	questions)				
Can hazard segregation, e	elimination, or material substitu	ition be used?		Yes (provide com	nments) 🗹 N	lo
Can any of the materials in	n the waste stream be recycle	d or reused?		l Yes (<i>provide com</i>	nments) 🗹 N	lo
Has waste minimization be	een incorporated into procedu	res or other process	controls? ☑	Yes		lo (provide comments)
Can this waste be generat	ed outside a RCA?			Yes (provide com	nments) 🗆 N	lo ☑ N/A
Comments:						
Section 2 - Chemical and I	Physical Information					
Waste Type (check only of		eck all that apply)	Waste Soul	ce (check only on	e) Waste M	latrix (check only one)
☐ Unused/Unspent Chem			Waste Soul		Gas	,
☑ Process Waste/Spent	☑ Organic		Decon		□ ≤1.5 /	Atmospheres Pressure
Chemical/Other	☑ Solvent (see instru			s Processing/Prod h/Development/Te	ating	Atmospheres Pressure
Radiological Information	□ Degreaser (see in □ Dioxin	structions)	l —	ed Maintenance	Liquif	ied Compressed Gas
Was Waste generated in a	l —			eeping - Routine	Liquid	
☐ Yes ☑ No	☐ Treated Hazardou	s Waste or Residue		anup - Routine	☐ Aque	
☑ Non-radioactive	☐ No-Longer Contai			g - Routine Monito		Aqueous
☐ Radioactive - Low Leve	Explosive Process ☐ Infectious/Medical		☐ Other (d	escribe)		ended Solids/Aqueous
☐ Radioactive - Transurar	nic Biological				☐ Suspe	ended Solids/Non-
Waste Destination (check	D		Waste Soul	rce B	Solid	ous
SWWS	´ │ ∐ Empty Container (☐ Abateme			ler/Ash/Dust
□ RLWTF	☐ Battery (see instru	ctions)		ction/Upgrades	☑ Fowd	lei/Asii/Dusi
□RLWTP	Asbestos ☐ Friable		☐ Demoliti		☐ Sludg	ie.
☐ TA-16/HE	□ Non-Friable		☐ Decon/□		"	rbed/Solidified Liquid
□NTS	PCB Source Conce	ntration	☐ Investiga	ative Derived	☐ Debri	•
Classified Information			ation/Restoration	Matrix T	ype (check only one)	
Classified Information ☑ Unclassified	□ PCB >= 50 - < 500) ppm		ng (secondary)	✓ Home	ogeneous
☐ Classified/Sensitive	☐ PCB >= 500 ppm ☐ Hazardous Waste	Contaminated Soil		duled Maintenance		rogeneous
	☐ Untreated Hazard		☐ Houseke	eeping (non-routine anup (non-routine	e)	-900000
	☐ Commercial Solid	Waste		anup (non-routine ₎ roleum Tanks	'	
	☐ Other [Describe]		☐ Petroleu			
			☐ Other (d	escribe)	Estimate	Annual Volume (m³):
	Other:		Other:			
	1 0 11 10 1 .		· Juliot.		ı	

Section 3 - Process and Waste Description

Process Description:

Columns are made to "cleanup" environmental samples containing suspect PCBs in hexane solvent. All waste in this stream are spent column contents and do not contain PCBs. Florisil is a non-polar absorbent, sodium sulfate is used to dryout any remaining water in the samples. Acidified silica gel (trace sulfuric acid) is used to purify/elute the extract before GC-ECD analysis.

Waste Description: Sodium Sulfate that has come i contact with methlyene chloride

silica gel that has come in contact with sulfuric acid in a 50:50 w/w% ratio.

Florisil granules							
Section 4 - Characteristics							
Ignitability (check only one) ☐ < 73 F (< 22.8 C) ☐ 73 - 99 F (22.8 - 37.2 C) ☐ 100 - 139 F (37.8 - 59.4 C) ☐ 140 - 200 F (60.0 - 99.3 C) ☐ > 200 (> 99.3 C) ☐ EPA Ignitable - Non-liquid ☐ DOT Flammable Gas ☐ DOT Oxidizer ☑ Not Ignitable	□ <= 2.0 □ 2.1 - 4.0 □ 4.1 - 6.0 □ 6.1 - 9.0 □ 9.1 - 12.4 □ >= 12.5 □ Liquid Corrosive to Steel		Reactivity (check as many as apply) □ RCRA Unstable □ Water Reactive □ Cyanide Bearing □ Sulfide Bearing □ Pyrophoric □ Shock Sensitive □ Explosive [Specify DOT Div.] □ Non-Reactive		F (<= 35 C) (> 35 C)		
	С	haracteriz	zation Met	hod	Concentration of Contaminant	S	
Identification all contempinants listed				None or	Contaminant present at		Domiletem Limit
Identify for all contaminants listed Toxicity Characteristic Metals	AK	TCLP	Total	Non-detect	<u>Minimum</u> <u>Maxiumum</u> (10,000 ppm = 1%)		Regulatory Limit
-	$\overline{\mathbf{A}}$			$\overline{\mathbf{V}}$	to	nnm	5.0 ppm
Arsenic					to	ppm	5.0 ppm
Barium	Ø			<u> </u>		ppm	100.0 ppm
Cadmium	<u> </u>			☑	to	ppm	1.0 ppm
Chromium	☑		<u> </u>	☑	to	ppm	5.0 ppm
Lead	<u> </u>	 -	<u> </u>	<u> </u>	to	ppm	5.0 ppm
Mercury	<u> </u>			<u> </u>	to	ppm	0.2 ppm
Selenium	<u> </u>			<u> </u>	to	ppm	1.0 ppm
Silver	V			✓	to	ppm	5.0 ppm
Toxicity Characteristic Organics					4-		0.5
Benzene	<u> </u>	<u> </u>	<u> </u>	<u> </u>	to	ppm	0.5 ppm
Carbon tetrachloride	<u> </u>			☑	to	ppm	0.5 ppm
Chlorobenzene	<u> </u>		<u> </u>	<u> </u>	to	ppm	100.0 ppm
Chloroform	<u> </u>			<u> </u>	to	ppm	6.0 ppm
Cresol	<u> </u>		<u> </u>	<u> </u>		ppm	200.0 ppm
p-Cresol	<u> </u>	 -	<u> </u>	<u> </u>	to	ppm	200.0 ppm
m-Cresol	<u> </u>			<u> </u>	to	ppm	200.0 ppm
o-Cresol	<u> </u>		$\vdash \sqsubseteq$	☑	to	ppm	200.0 ppm
1,4-Dichlorobenzene	<u> </u>	 -	├	<u> </u>	to	ppm	7.5 ppm
1,2-Dichloroethane	<u> </u>			<u> </u>	to	ppm	0.5 ppm
1,1-Dichloroethylene	<u> </u>	-	<u> </u>	☑	to	ppm	0.7 ppm
2,4-Dinitrotoluene	<u> </u>		<u> </u>	<u> </u>	to	ppm	0.13 ppm
Hexachlorobenzene	<u> </u>			<u> </u>	to	ppm	0.13 ppm
Hexachlorobutadiene	<u> </u>		<u> </u>	☑	to	ppm	0.5 ppm
Hexachloroethane	<u> </u>		<u> </u>	<u> </u>	to	ppm	3.0 ppm
Methyl ethyl ketone	<u> </u>			☑		ppm	200.0 ppm
Nitrobenzene	<u> </u>			☑		ppm	2.0 ppm
Pentachlorophenol	<u> </u>			☑	to to	ppm	100.0 ppm
Pyridine	<u> </u>			☑		ppm	5.0 ppm
Tetrachloroethylene	<u> </u>			<u> </u>	to	ppm	0.7 ppm
Trichloroethylene				Ø	to to	ppm	0.5 ppm
2,4,6-Trichlorophenol	Ø			Ø		ppm	2.0 ppm
2,4,5-Trichlorophenol	Ø			Ø	to	ppm	400.0 ppm
Vinyl chloride	V			V	to	ppm	0.2 ppm
Herbicides and Pesticides					1.		
Chlordane	Ø			☑	to	ppm	0.03 ppm
2,4-D	Ø			<u> </u>	to	ppm	10.0 ppm
Endrin	<u> </u>			☑ □	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			Ø		ppm	0.008 ppm
Lindane (gamma-BHC)	Ø			☑ □	to	ppm	0.4 ppm
Methoxychlor	Ø			☑ □		ppm	10.0 ppm
2,4,5-TP (Silvex)	<u> </u>	무		<u> </u>	to to	ppm	1.0 ppm
Toxaphene	V			<u> </u>	l to	ppm	0.5 ppm

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (ppi	n) Maxim	num (ppm)			
7757-82-6	Sodium sulfate			250000			
75-09-2	Methylene chloride		to	1			
7004.00.0	Silica Gel CAS # 112926-00-8	450000		10000			
7664-93-9	Sulfuric acid Florisil	150000	to 2	10 270000			
	1 101011	130000	10 2	70000			
	Total of max. ranges of this section and page 2		123.00	in %			
	Additional Information						
	on is available on the chemical, physical, or radiological character of the waste not covered			W			
	acidified silica are completely dry once added to the waste container. Trace amounts, if any	, of sulfuric acid	and				
dichloromethane ren	nain with solids.						
Waste log sheets wil	I be included with each waste container. Waste log sheets present in "documentation" for for	ull bottles ready	for disposal.	_			
	be included with future waste containers once they are full and ready for packaging.	,					
Section 6 - Work Cor	ntrol Documentation						
Do the procedures for	or this process cover how to manage this waste?	mments)					
	or this process address controls to prevent changes to waste constituents and concentration	· · · · · · · · · · · · · · · · · · ·	removal of				
waste to/from contai		ns or addition of	Terrioval of				
Comments:							
Section 7 - Packagin	Section 7 - Packaging and Storage Control						
	ste will be packaged in according to the applicable WAC.						
	ccordance with P409-1. Waste will be accumulated in amber glass bottles, then packed into		ylene drums	which are			
compatible with the s	pecified waste streams (i.e., lab-packs). All material in compostion are compatiable with e	each other.					
Identify the storage n	nanagement controls that will be used for this waste stream: (check all that apply)						
☐ Tamper Indication	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Oth	er (describe)					
Section 8 - Waste Certification Statements							
☑ Waste appears to	meet WAC attachment for: HAZ						
☐ Waste stream nee	ds exception/exemption for treatment, storage, or disposal.						
	eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Pr	inciple Associate	Director fo	r			
	s [PADWP] for assistance.)						
	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certification:						
	m is correct and that it meets the requirements of the applicable waste acceptance criteria. regulatory agencies and that there are significant penalties for submitting false information,						
imprisonment for know		including the po	SSIDILLY OF IT	iles alla			
Cianatura, 14/1/1/14	ALIOLUS (442000)						
Signature: <u>WILLIAN</u>	MHOLLIS (113868) Date: 09/12/19 07:37 A	IVI					
Waste Management	Approval: I have reviewed this form and any associated attachments and the characteriza	ition information	provided ap	pears to			
	urate. I certify, to the best of my knowledge, that the waste characterization information pro						
the requirements of the	ne applicable WAC.						
Signature: PHILIP I	MARTINEZ (208498) Date: 09/12/19 08:24 A	M					
	e reviewed this form and any associated attachments and the characterization information						
	the best of my knowledge, that the waste characterization information provided by the wast	te generator me	ts the requi	rements of			
the applicable WAC.							
Signature: ANDY E	<u>LICIO (118692)</u> Date: <u>09/12/19 09:21 A</u>	M					

Attachment 4 - LDR and U	Attachment 4 - LDR and UHC						
Identify category and presence of any constituents listed below (equal to or above limit)	•						
Non-Wastewater/Wastewater Category (check only one)							
☑ Non Wastewater ☐ Wastewater [as defined by 40 CFR 268.2(f)]	☐ Lab Pack [40 CFR 268.2(f)]	Sign Certification #1					
Notifications and Certifications - Check the applicable boxes							
Generator Requirements:							
☐ This shipment contains hazardous waste contaminated soil that does not meet treat	ment standards	Sign Certification #2					
☐ This shipment contains untreated hazardous debris to be treated to 40 CFR 268.45	treatment standards	(No certification)					
☐ Hazardous wastes (except soil) meeting treatment standards at point of generation		Sign Certification #3					
☐ Hazardous wastes contaminated soil meeting treatment standards at point of general	ation	Sign Certification #4					
TSDF or Generator Treatment:							
\Box TSDF treated hazardous debris meeting the alternative treatment standards of 40 (CFR 268.45	Sign Certification #5					
☐ Generator treated hazardous debris meeting the alternative treatment standards of	40 CFR 268.45	Sign Certification #6					
☐ Hazardous wastes contaminated soil treated to 40 CFR 268.49		Sign Certification #7					
☐ Wastes or residues from characteristic hazardous waste treatment meeting treatment standards and UTS Sign Certificati							
☐ Wastes or residues from characteristic hazardous waste treatment not meeting UTS	S	Sign Certification #9					
☐ Other TSDF wastes meeting the more stringent 40 CFR 268.40 treatment standard	s to be land disposed	Sign Certification #10					
☐ Other generator wastes meeting the more stringent 40 CFR 268.40 treatment stand	dards to be land disposed	Sign Certification #11					
Notification of Underlying Hazardous	s Constituents						
(Check the applicable underlying constituents above the concentration level	ls for D001 through D043 characte	rstic wastes only)					
☑ No Underlying Hazardous Constituents in this waste stream.							

☑ /	No Underlying Hazardous Constituents in t	his waste st			
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS
_	Organic Constituents	CASRN			(mg/kg unless noted otherwise)
	Acenaphthene	83-32-9		3.4	34.0
_	Acenaphthylene	208-96-8		3.4	34.0
	Acetone	67-64-1		160.0	1600.0
	Acetonitrile	75-05-8		38.0	380.0
	Acetophenone	98-86-2		9.7	97.0
	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0
	Acrolein	107-02-8	0.29	N/A	N/A
	Acrylamide	79-06-1	19.0	23.0	230.0
	Acrylonitrile	107-13-1	0.24	84.0	840.0
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8
	Aldrin	309-00-2	0.021	0.066	0.66
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A
	Aniline	62-53-3	0.81	14.0	140.0
	o-Anisidine	90-04-0	0.01	0.66	6.6
	Anthracene	120-12-7	0.059	3.4	34.0
	Aramite	140-57-8	0.36	N/A	N/A
	alpha-BHC	319-84-6	0.00014	0.066	0.66
	beta-BHC	319-85-7	0.00014	0.066	0.66
	delta-BHC	319-86-8	0.023	0.066	0.66
	Barban	101-27-9	0.056	1.4	14.0
	Bendiocarb	22781-23-3	0.056	1.4	14.0
	Benomyl	17804-35-2	0.056	1.4	14.0
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0
	Benzal chloride	98-87-3		6.0	60.0
	Benzene	71-43-2	0.14	10.0	100.0
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0
$\overline{}$	Benzo[ghi]perylene	191-24-2		1.8	18.0
	Benzo[k]fluoranthene	207-08-9	0.11	6.8	68.0
$\overline{}$	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0
	Bromodichloromethane	75-27-4		15.0	150.0
	Bromomethane	74-83-9		15.0	150.0
$\overline{}$	4-Bromophenyl phenyl ether	101-55-3		15.0	150.0
	n-Butyl alchohol	71-36-3		2.6	26.0
_	Butyl benzyl phthalate	85-68-7		28.0	280.0
	Butylate	2008-41-5		1.4	14.0
ö	Carbaryl	63-25-2		0.14	1.4
<u> </u>	Carbaryi	03-23-2	0.000	U. 14	1.4

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3		6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8		N/A	N/A
	Chloroform	67-66-3		6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8		5.7	57.0
	Chloroprene	126-99-8		0.28	2.8
=	3-Chloropropylene	120-99-6	0.037	30.0	300.0
	Chrysene	218-01-9		3.4	
	p-Cresidine	120-71-8		0.66	34.0 6.6
<u>-</u>	m-Cresol	108-39-4	0.77	5.6	56.0
<u>_</u>	o-Cresol	95-48-7	0.11	5.6	56.0
	p-Cresol	106-44-5		5.6	56.0
<u>_</u>	m-Cumenyl methylcarbamate	64-00-6		1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
<u>_</u>	Cyanide (Total)	57-12-5		590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
<u>_</u>	2,4-D	94-75-7	0.72	10.0	100.0
	o,p'-DDD	53-19-0		0.087	0.87
<u> </u>	p,p'-DDD	72-54-8		0.087	0.87
	o,p'-DDE	3424-82-6		0.087	0.87
	p,p'-DDE	72-55-9		0.087	0.87
	o,p'-DDT	789-02-6	0.0039	0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2	0.057	28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1	0.036	6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3		6.0	60.0
	1,2-Dichloroethane	107-06-2		6.0	60.0
	1,1-Dichloroethylene	75-35-4		6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5		30.0	300.0
	2,4-Dichlorophenol	120-83-2		14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-02-6		18.0	180.0
				0.13	
	Diethyl phthalata	60-57-1	0.017		1.3
Corm	Diethyl phthalate	84-66-2	U.Z	28.0	280.0

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8	0.023	0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
	Endrin	72-20-8	0.0028	0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
	Ethyl acetate	141-78-6	0.34	33.0	330.0
	Ethyl benzene	100-41-4	0.057	10.0	100.0
	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
	Hexachlorobenzene	118-74-1	0.055	10.0	100.0
	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
	Hexachlorocyclopentadiene	77-47-4		2.4	24.0
	Hexachloroethane	67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7		30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1		0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
	Iodomethane	74-88-4		65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0	0.0011	0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
_		•	•	•	,

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
Methyl methanesulfonate	66-27-3	0.018	N/A	N/A
Methyl parathion	298-00-0	0.014	4.6	46.0
3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
Methylene chloride	75-09-2	0.089	30.0	300.0
Metolcarb	1129-41-5	0.056	1.4	14.0
Mexacarbate	315-18-4	0.056	1.4	14.0
Molinate	2212-67-1	0.042	1.4	14.0
N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
Naphthalene	91-20-3	0.059	5.6	56.0
2-Naphthylamine	91-59-8	0.52	N/A	N/A
5-Nitro-o-toluidine	99-55-8		28.0	280.0
o-Nitroaniline	88-74-4	0.27	14.0	140.0
p-Nitroaniline	100-01-6		28.0	280.0
Nitrobenzene	98-95-3	0.068	14.0	140.0
o-Nitrophenol	88-75-5		13.0	130.0
p-Nitrophenol	100-02-7	0.12	29.0	290.0
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
Oxamyl	23135-22-0	0.056	0.28	2.8
Parathion	56-38-2	0.014	4.6	46.0
PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
Pebulate	1114-71-2		1.4	14.0
Pentachlorobenzene	608-93-5	0.055	10.0	100.0
Pentachloroethane	76-01-7	0.055	6.0	60.0
Pentachloronitrobenzene	82-68-8		4.8	48.0
Pentachlorophenol	87-86-5	0.089	7.4	74.0
Phenacetin	62-44-2	0.081	16.0	160.0
Phenanthrene	85-01-8		5.6	56.0
Phenol	108-95-2	0.039	6.2	62.0
1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
o-Phenylenediamine	95-54-5	N/A	N/A	N/A
Phorate	298-02-2		4.6	46.0
Phthalic acid	100-21-0	0.055	28.0	280.0
Phthalic anhydride	85-44-9		28.0	
Physostigmine	57-47-6		1.4	280.0 14.0
Physostigmine salicylate	57-64-7	0.056	1.4	14.0
Promecarb	2631-37-0	0.056	1.4	14.0
Pronamide	23950-58-5		1.5	15.0
Propanenitrile Propham	107-12-0		360.0	3600.0
Proposur	122-42-9	0.056 0.056	1.4 1.4	14.0
Proposur	114-26-1			14.0
Prosulfocarb	52888-80-9	0.042	1.4	14.0
Pyrene	129-00-0	0.067	8.2	82.0
Pyridine	110-86-1	0.014	16.0	160.0
Safrole	94-59-7	0.081	22.0	220.0
Sulfide	18496-25-8		N/A	N/A
2,4,5-T	93-76-5		7.9	79.0
TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
2,4,5-TP (Silvex)	93-72-1	0.72	7.9	79.0

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



WASTE PROFILE FORM COVER SHEET

47579 APPROVED

Waste	Characterization	Information

Waste Stream ID:	47579
WPF ID (Legacy):	
Waste Stream Name:	ORGANIC SOLVENTS FOR PCB EXTRACTION
Expiration Date:	09/22/2021
Waste Type:	Hazardous Waste
Radiological Type:	Non Radioactive
RCRA Category:	RCRA Solid Hazardous
Ancillary Types:	
Primary Composition:	Chemical
Composition (other):	
EPA Codes:	D001 F002 F003
Waste Acceptance:	
EPA Form Code:	<u>W204</u>
	Organic Liquids: Concentrated halogenated/ non-halogenated solvent mixture
EPA Source Code:	<u>G22</u>
	Pollution Control and Waste Management Process Residuals: Laboratory analytical wastes (used chemicals from laboratory operations)

Waste Generation Estimates



WASTE PROFILE FORM

Referenc	e Number
WCATS ID	Legacy WPF ID
47579	

Generator's Z Number	Waste Generator's Name (pa	rint) WMC's Z Nu	umber	WMC's Name (pr	rint)	Generator's Phone
342232	HUBER, DANIEL	208	3498	MARTINE	5056672209	
Generator's Mail Stop	Waste Generating Group	Waste Stream Tecl	hnical Area	Building	Room	WMC Phone
K484	C-CDE	59		000001	119	5056060818
Waste Accumulation (che	eck only one)	•		□ Central Accur	mulation Area Site	No:
☑ Satellite Accumulation A	Area Site No	: <u>6801</u>		☐ NM Special W		No:
☐ Less-than-90 Days Stor	rage Area Site No			☐ None of the A	bove Site	No:
□TSDF	Site No	:		☐ PCBs Storage	e Area Site	No:
☐ Universal Waste Storag		<u> </u>		☐ Rad Staging	Area Site	No:
☐ Used Oil for Recycle ER Use Only	Site No	:		☐ Rad Storage	Area Sile	No:
☐ ER Site	SWM1/AOC N	0				
	on (check as many as apply)	J				
	, , , , , , , , , , , , , , , , , , , ,	hod Sa	ample No:			
☐ Chemical/Physical Ana ☐ Radiological Analysis		imple No:				
☐ PCB Analysis	☐ Attac	hed Sa	imple No:			
☑ Acceptable Knowledge				cedure, Waste Log s	heet when	
☑ Material Safety Data SI	heet (MSDS) ☑ Attac	hed	MS	DS		
Section 1 - Waste Prevent	ion/Minimization (answer all	questions)				
Can hazard segregation, e	elimination, or material substit	ution be used?		Yes (provide com	nments) 🗹 N	0
Can any of the materials in	n the waste stream be recycle	d or reused?		Yes (provide com	nments) 🗹 N	0
Has waste minimization be	een incorporated into procedu	res or other process	controls? ☑	Yes	□N	o (provide comments)
Can this waste be generat	ed outside a RCA?			Yes (provide com	nments) 🗆 N	o ☑ N/A
Comments:						
Section 2 - Chemical and I	Physical Information					
Waste Type (check only of		eck all that apply)	Waste Sour	ce (check only on	e) Waste M	atrix (check only one)
☐ Unused/Unspent Chem			Waste Sour		Gas	,
☑ Process Waste/Spent	☑ Organic		Decon		□ ≤1.5 /	Atmospheres Pressure
Chemical/Other	☑ Solvent (see instr			s Processing/Prod h/Development/Te	ating	Atmospheres Pressure
Radiological Information	□ Degreaser (see ir □ Dioxin	istructions)	l —	n/Development/Te ed Maintenance	Liquif	ed Compressed Gas
Was Waste generated in a	l —			eping - Routine	Liquid	
☐ Yes ☑ No		us Waste or Residue		anup - Routine	☐ Aque	
✓ Non-radioactive	☐ No-Longer Conta			g - Routine Monito		•
☐ Radioactive - Low Leve	Explosive Proces ☐ Infectious/Medica		, ,			ended Solids/Aqueous
☐ Radioactive - Transurar	nic	ı			☐ Suspe	ended Solids/Non-
Waste Destination (check	— □ D = m dli :		Waste Sour	rce B	Solid	543
SWWS	´		☐ Abateme			er/Ash/Dust
□ RLWTF	☐ Battery (see instr	uctions)		ction/Upgrades	☐ Fowd	ei/Asii/Dust
□RLWTP	Asbestos ☐ Friable		☐ Demoliti		☐ Sludg	e
☐ TA-16/HE	□ Non-Friable		Decon/D		-	bed/Solidified Liquid
□NTS	PCB Source Conce	entration	☐ Investiga	ative Derived	☐ Debri	
Classified Information	□ PCB < 50 ppm			ation/Restoration	Matrix T	ype (check only one)
Classified Information ☑ Unclassified	□ PCB >= 50 - < 50			ng (secondary)	ПНото	ogeneous
☐ Classified/Sensitive	☐ PCB >= 500 ppm ☐ Hazardous Waste			luled Maintenance	,	ogeneous
	☐ Untreated Hazard		☐ Houseke	eeping (non-routine) anup (non-routine)	∍)	-geeeue
	☐ Commercial Solid	Waste		anup (non-routine ₎ roleum Tanks	'	
	☐ Other [Describe]		☐ Petroleu			
			☐ Other (d	escribe)	Estimate	Annual Volume (m³):
	Other:		Other:			
	Cuioi.		Julion.		1	

Section 3 - Process and Waste Description

Process Description:

Solvent used for extraction of PCBs from santiary waste water and solvents used for diluting GC calibration standards.

Waste Description:

Solvents used for the extraction of PCs from sanitary wastewater. Instrument conditioning: 20 mL dichloromethane, 20 mL hexane. Extraction cleanup: 20 mL dichloromethane rinses, <5 mL acetone rinses. Sample clean-up procedure solvent: 20 mL hexane rinses. All solvent waste will be free of PCBs. Any solvent containing PCBs is collected as a sample. Methanol will rarely be used. Trace amounts of methanol will be present from cleaning the Dryvap extraction apparatus. When used, methanol will not be in combination with any other solvent present in this WSP. It will be used by itself for cleaning, supporting EPA F003.

Calibration: Isooctane is used to dilute PCB standards to calibrate gas chromatography instruments. Trace amounts of PCB-free isooctane will be present in this waste stream, as vials and glassware will be rinsed prior to calibration standards being made.

There is no water present in this waste.

Section 4 - Characteristics							
Ignitability (check only one)	Corrosi	vity (che	ck only o	<i>ne)</i> (pH)	Reactivity (check as many as apply)	Boiling F	Point (check only one)
☑ < 73 F (< 22.8 C)	□<= 2.0	0 `	•	, ,	☐ RCRA Unstable		F (<= 35 C)
□ 73 - 99 F (22.8 - 37.2 C)	□2.1 - 4	4.0			☐ Water Reactive		(> 35 C)
□ 100 - 139 F (37.8 - 59.4 C)	4.1 - 6				☐ Cyanide Bearing		pplicable
□ 140 - 200 F (60.0 - 99.3 C)	6.1 - 9				☐ Sulfide Bearing	- 110171	ppilodbie
□ > 200 (> 99.3 C)	□ 0.1 □ 9.1 -				☐ Pyrophoric		
	□ 9.1 - □ >= 12				☐ Shock Sensitive		
☐ EPA Ignitable - Non-liquid			04.	-1			
☐ DOT Flammable Gas		d Corrosiv	e to Ste	еі	Explosive [Specify DOT Div.]		
☐ DOT Oxidizer	☑ Non-a	aqueous			☑ Non-Reactive		
☐ Not Ignitable							
		haracteriz	otion Mot	hod	Concentration of Contaminant	•	T
		ilaracteriz	ation we	None or	Contaminant present at	<u> </u>	1
Identify for all contaminants listed	AK	TCLP	Total	Non-detect			Regulatory Limit
Toxicity Characteristic Metals	7			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(10,000 ppm = 1%)		
Arsenic	$\overline{\mathbf{A}}$			\square	to	ppm	5.0 ppm
Barium	<u> </u>			<u> </u>	to	ppm	100.0 ppm
Cadmium	<u> </u>			<u> </u>	to	ppm	1.0 ppm
Chromium	Ø	i ii		<u> </u>	to	ppm	5.0 ppm
Lead	Ø			<u> </u>	to	ppm	5.0 ppm
Mercury	Ø			<u> </u>	to	ppm	0.2 ppm
Selenium	Ø	H		<u> </u>	to	ppm	1.0 ppm
Silver	<u> </u>		Н	$\overline{\mathbf{Z}}$	to	ppm	5.0 ppm
Toxicity Characteristic Organics			_ ⊔		10	ррии	3.0 ppm
Benzene	$\overline{\mathbf{A}}$			V	to	ppm	0.5 ppm
Carbon tetrachloride	<u> </u>			<u> </u>	to	• •	0.5 ppm
Chlorobenzene	<u> </u>	-	 	<u> </u>	to	ppm	
					to	ppm	
Chloroform		H		<u> </u>		ppm	6.0 ppm
Cresol	<u> </u>					ppm	200.0 ppm
p-Cresol	<u> </u>			<u> </u>	to	ppm	200.0 ppm
m-Cresol	☑			<u> </u>	to	ppm	200.0 ppm
o-Cresol	☑			<u> </u>	to	ppm	200.0 ppm
1,4-Dichlorobenzene	☑				to	ppm	7.5 ppm
1,2-Dichloroethane	Ø			✓		ppm	0.5 ppm
1,1-Dichloroethylene	☑				to	ppm	0.7 ppm
2,4-Dinitrotoluene	☑			☑	to	ppm	0.13 ppm
Hexachlorobenzene	Ø			☑	to	ppm	0.13 ppm
Hexachlorobutadiene	Ø			☑	to	ppm	0.5 ppm
Hexachloroethane	☑			✓	to	ppm	3.0 ppm
Methyl ethyl ketone	\square			\square	to	ppm	200.0 ppm
Nitrobenzene	Ø			\square	to	ppm	2.0 ppm
Pentachlorophenol	$\overline{\mathbf{A}}$			✓	to	ppm	100.0 ppm
Pyridine	Ø			\square	to	ppm	5.0 ppm
Tetrachloroethylene	\square			✓	to	ppm	0.7 ppm
Trichloroethylene	\square			\square	to	ppm	0.5 ppm
2,4,6-Trichlorophenol	Ø			V	to	ppm	2.0 ppm
2,4,5-Trichlorophenol	\square				to	ppm	400.0 ppm
Vinyl chloride	Ø			V	to	ppm	0.2 ppm
Herbicides and Pesticides					1		
Chlordane	$\overline{\mathbf{V}}$			$\overline{\mathbf{A}}$	to	ppm	0.03 ppm
2,4-D	Ø			Ø		ppm	10.0 ppm
Endrin	Ø			<u> </u>	to	ppm	0.02 ppm
Heptachlor (& its epoxide)	Ø			<u> </u>		ppm	0.008 ppm
Lindane (gamma-BHC)	Ø			Ø	to	ppm	0.4 ppm
Methoxychlor	Ø			<u> </u>		ppm	10.0 ppm
2,4,5-TP (Silvex)	Ø		<u> </u>	V	to	ppm	1.0 ppm
Toxaphene	Ø			Ø	to	ppm	0.5 ppm
. o.capitorio						1 10 111	0.0 FF

Section 5 - Additional Constituents and Contaminants

Additional Constituents and Contaminants. Please account for 100% of waste. Range should be given within guidelines of individual constituents. List all other constients (including inerts) not identified above and attach any applicable analysis. No chemical formula allowed in this field. Continue in Section 3 Additional information as necessary. CAS numbers are needed for all chemical constituents, for material without a CAS number, enter "No CAS Number".

CAS No.	Name of constituent	Minimum (pp	m)	Maximum (ppm)					
67-64-1	Acetone	20000	to	80000					
75-09-2	Methylene chloride	450000	to	620000					
110-54-3	Hexane	300000	to	500000					
67-56-1	Methanol	10000	to	70000					
	Isooctane CAS # 540-84-1	0	to	20000					
	Total of max. ranges of this section and page 2			129.00 in %					
	Additional Information			123.00 111 70					
If additional information	on is available on the chemical, physical, or radiological character of the waste not covered	on this form pr	ovide	e it below					
There is no water co		он ино тотти, ра							
There is no water so	TOTAL III UIIO WASIE.								
Section 6 - Work Cor	atral Desumentation								
Do the procedures to	or this process cover how to manage this waste?	mments)							
	or this process address controls to prevent changes to waste constituents and concentration	ns or addition or	rem	oval of					
waste to/from contain	ners? 🗹 Yes 🗆 No (provide comments)								
Comments:									
Section 7 - Packagin	g and Storage Control								
Describe how the wa	ste will be packaged in according to the applicable WAC.								
	ccordance with P409-1. Waste will be accumulated in glass bottles or Nalgene plastic cont	ainers, then pac	ked	into DOT-					
	which are compatible with the specified waste streams. (i.e., lab-packs). All material inde								
	other. All class bottles and/or Nalgene plastic containers are confirmed to be chemically or nanagement controls that will be used for this waste stream: (check all that apply)	omnatile with the	2 601	want wasta in this					
, ,	Devices ☐ Limited use locks with log-in for waste ☑ Locked cabinet or building ☐ Oth	er (describe)							
·	rtification Statements	. (400020)							
	☑ Waste appears to meet WAC attachment for: HAZ								
	ds exception/exemption for treatment, storage, or disposal. eet the criteria for any known TSDF. (DOE approval is required. Contact the office of the Pr	inciple Acceptat	a Dir	en et e v fo v					
	set the chiefla for any known 15DF. (DOE approval is required. Contact the office of the Pr s [PADWP] for assistance.)	incipie Associai	ווט פ	ector for					
	rtification: Based on my knowledge of the waste and/or chemical/physical analysis, I certii	v that the waste	cha	racterization					
information on this for	m is correct and that it meets the requirements of the applicable waste acceptance criteria.	I understand the	nat th	nis information will					
	regulatory agencies and that there are significant penalties for submitting false information,	including the po	ossib	oility of fines and					
imprisonment for know	wing violations.								
Signature: DANIEL	HUBER (342232) Date: 09/23/19 09:41 A	М							
	Approval: I have reviewed this form and any associated attachments and the characteriza								
the requirements of the	rrate. I certify, to the best of my knowledge, that the waste characterization information pro	vided by the wa	iste (generator meets					
	• •								
Signature: PHILIP I	MARTINEZ (208498) Date: 10/02/19 11:09 A	M							
DODA Parite 11				ha aamiiliki					
	e reviewed this form and any associated attachments and the characterization information the best of my knowledge, that the waste characterization information provided by the was								
the applicable WAC.	the best of my knowledge, that the waste characterization information provided by the was	e generator me	ซเอ li	ne requirements of					
signature: ROBER	T MOLTER (239137) Date: 10/02/19 11:13 A	VI							

Attachment 4 - LDR and UHC

		P (11 1	, ,,	P 10			
	Identify category and presence of any constituents listed below (equal to or above limit).						
Non-Wastewater/Wastewater Category (check only one) ☑ Non Wastewater □ Wastewater [as defined by 40 CFR 268.2(f)] □ Lab Pack [40 CFR 268.2(f)] Sign Certification #1							
	fications and Certifications - Check the app			Lab Fack [40 CFR 200.2	2(1)] Sign Certification #1		
	• •	mouble box	,5				
Generator Requirements: □ This shipment contains hazardous waste contaminated soil that does not meet treatment standards Sign Certification #2							
	rnis snipment contains nazardous waste conta rhis shipment contains untreated hazardous d				Sign Certification #2 (No certification)		
	Hazardous wastes (except soil) meeting treatm				Sign Certification #3		
	Hazardous wastes contaminated soil meeting t				Sign Certification #4		
	F or Generator Treatment:			generation.			
	TSDF treated hazardous debris meeting the a	Iternative trea	atment standards	of 40 CFR 268 45	Sign Certification #5		
	Generator treated hazardous debris meeting t	he alternative	treatment standa	ards of 40 CFR 268 45	Sign Certification #6		
	Hazardous wastes contaminated soil treated to			140 01 10 01 11 200. 10	Sign Certification #7		
	Wastes or residues from characteristic hazard			reatment standards and UTS	Sign Certification #8		
	Wastes or residues from characteristic hazard				Sign Certification #9		
	Other TSDF wastes meeting the more stringer	nt 40 CFR 26	8.40 treatment sta	andards to be land disposed	Sign Certification #10		
	Other generator wastes meeting the more strii	ngent 40 CFF	R 268.40 treatmen	t standards to be land disposed	Sign Certification #11		
				ardous Constituents			
	(Check the applicable underlying cons	tituents abov	e the concentration	n levels for D001 through D043 ch	aracterstic wastes only)		
\square $ \wedge$	lo Underlying Hazardous Constituents in th	nis waste str	eam.				
			Wastewater	Non Wastewater Standard	Hazardous Soil 10Xs UTS		
	Organic Constituents	CASRN	Standard (mg/L)	(mg/kg unless noted otherwise)	(mg/kg unless noted otherwise)		
	Acenaphthene	83-32-9	0.059	3.4	34.0		
	Acenaphthylene	208-96-8	0.059	3.4	34.0		
$\overline{\mathbf{V}}$	Acetone	67-64-1	0.28	160.0	1600.0		
	Acetonitrile	75-05-8	5.6	38.0	380.0		
	Acetophenone	98-86-2	0.01	9.7	97.0		
			2 2	-			
<u>_</u>	2-Acetylaminofluorene	53-96-3	0.059	140.0	1400.0		
	Acrolein	107-02-8	0.29	N/A	N/A		
	Acrylamide	79-06-1	19.0	23.0	230.0		
	Acrylonitrile	107-13-1	0.24	84.0	840.0		
	Aldicarb sulfone	1646-88-4	0.056	0.28	2.8		
	Aldrin	309-00-2	0.021	0.066	0.66		
	4-Aminobiphenyl	92-67-1	0.13	N/A	N/A		
	Aniline	62-53-3	0.81	14.0	140.0		
	o-Anisidine	90-04-0	0.01	0.66	6.6		
	Anthracene	120-12-7	0.059	3.4	34.0		
	Aramite	140-57-8	0.36	N/A	N/A		
	alpha-BHC	319-84-6	0.00014	0.066			
					0.66		
	beta-BHC	319-85-7	0.00014	0.066	0.66		
	delta-BHC	319-86-8	0.023	0.066	0.66		
	Barban	101-27-9	0.056	1.4	14.0		
	Bendiocarb	22781-23-3	0.056	1.4	14.0		
	Benomyl	17804-35-2	0.056	1.4	14.0		
	Benz[a]anthracene	56-55-3	0.059	3.4	34.0		
	Benzal chloride	98-87-3	0.055	6.0	60.0		
	Benzene	71-43-2	0.14	10.0	100.0		
	Benzo(b)fluoranthene	205-99-2	0.11	6.8	68.0		
	Benzo[a]pyrene	50-32-8	0.061	3.4	34.0		
	Benzo[ghi]perylene	191-24-2	0.0055	1.8	18.0		
	Benzo[k]fluoranthene	207-08-9	0.11	6.8			
	. ,				68.0		
<u>_</u>	Bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2	72.0		
	Bis(2-chloroethyl) ether	111-44-4	0.033	6.0	60.0		
	Bis(2-chloroisopropyl) ether	39638-32-9	0.055	7.2	72.0		
	Bis(2-ethylhexyl) phthalate	117-81-7	0.28	28.0	280.0		
	Bromodichloromethane	75-27-4	0.35	15.0	150.0		
	Bromomethane	74-83-9	0.11	15.0	150.0		
	4-Bromophenyl phenyl ether	101-55-3	0.055	15.0	150.0		
	n-Butyl alchohol	71-36-3	5.6	2.6	26.0		
	Butyl benzyl phthalate	85-68-7	0.017	28.0	280.0		
	Butylate Butylate	2008-41-5		1 4	14.0		

□ Carbaryl

0.006

0.14

63-25-2

	Organic Constituents	CASRN	Wastewater Standard (mg/L	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Carbendazim	10605-21-7	0.056	1.4	14.0
	Carbofuran	1563-66-2	0.006	0.14	1.4
	Carbofuran phenol	1563-38-8	0.056	1.4	14.0
	Carbon disulfide	75-15-0	3.8	4.8	48.0
	Carbon tetrachloride	56-23-5	0.057	6.0	60.0
	Carbosulfan	55285-14-8	0.028	1.4	14.0
	Chlordane	57-74-9	0.0033	0.26	2.6
	p-Chloro-m-cresol	59-50-7	0.018	14.0	140.0
	p-Chloroaniline	106-47-8	0.46	16.0	160.0
	Chlorobenzene	108-90-7	0.057	6.0	60.0
	Chlorobenzilate	510-15-6	0.1	N/A	N/A
	Chlorodibromomethane	124-48-1	0.057	15.0	150.0
	Chloroethane	75-00-3	0.27	6.0	60.0
	2-Chloroethyl vinyl ether	110-75-8	0.062	N/A	N/A
	Chloroform	67-66-3	0.046	6.0	60.0
	Chloromethane	74-87-3	0.19	30.0	300.0
	2-Chloronaphthalene	91-58-7	0.055	5.6	56.0
	2-Chlorophenol	95-57-8	0.044	5.7	57.0
	Chloroprene	126-99-8	0.057	0.28	2.8
	3-Chloropropylene	107-05-1	0.036	30.0	300.0
	Chrysene	218-01-9	0.059	3.4	34.0
	p-Cresidine	120-71-8	0.01	0.66	6.6
	m-Cresol	108-39-4	0.77	5.6	56.0
	o-Cresol	95-48-7	0.11	5.6	56.0
	p-Cresol	106-44-5	0.77	5.6	56.0
	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4	14.0
	Cyanide (Amenable)	57-12-5*	0.86	30.0	300.0
	Cyanide (Total)	57-12-5	1.2	590.0	5900.0
	Cyclohexanone	108-94-1	0.36	0.75	7.5
	2,4-D	94-75-7	0.72	10.0	100.0
	o,p'-DDD	53-19-0	0.023	0.087	0.87
	p,p'-DDD	72-54-8	0.023	0.087	0.87
	o,p'-DDE	3424-82-6	0.031	0.087	0.87
	p,p'-DDE	72-55-9	0.031	0.087	0.87
	o,p'-DDT	789-02-6	0.0039	0.087	0.87
	p,p'-DDT	50-29-3		0.087	0.87
	Di-n-butyl phthalate	84-74-2	0.057	28.0	280.0
	Di-n-octyl phthalate	117-84-0	0.017	28.0	280.0
	Di-n-propylnitrosamine	621-64-7	0.4	14.0	140.0
	Dibenz[a,h]anthracene	53-70-3	0.055	8.2	82.0
	Dibenzo[a,e]pyrene	192-65-4	0.061	N/A	N/A
	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15.0	150.0
	1,2-Dibromoethane	106-93-4	0.028	15.0	150.0
	Dibromomethane	74-95-3	0.11	15.0	150.0
	1,4-Dichlorobenzene	106-46-7	0.09	6.0	60.0
	m-Dichlorobenzene	541-73-1		6.0	60.0
	o-Dichlorobenzene	95-50-1	0.088	6.0	60.0
	Dichlorodifluoromethane	75-71-8		7.2	72.0
	1,1-Dichloroethane	75-34-3	0.059	6.0	60.0
	1,2-Dichloroethane	107-06-2	0.21	6.0	60.0
	1,1-Dichloroethylene	75-35-4	0.025	6.0	60.0
	trans-1,2-Dichloroethylene	156-60-5	0.054	30.0	300.0
	2,4-Dichlorophenol	120-83-2	0.044	14.0	140.0
	2,6-Dichlorophenol	87-65-0		14.0	140.0
	1,2-Dichloropropane	78-87-5		18.0	180.0
	trans-1,3-Dichloropropene	10061-02-6		18.0	180.0
	cis-1,3-Dichloropropylene	10061-01-5		18.0	180.0
	Dieldrin	60-57-1		0.13	1.3
	Diethyl phthalate	84-66-2		28.0	280.0
Form			winted 2/4/2021 11		Page 6 of 10

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Dimethyl phthalate	131-11-3	0.047	28.0	280.0
	p-Dimethylaminoazobenzene	60-11-7	0.13	N/A	N/A
	2,4-Dimethylphenol	105-67-9	0.036	14.0	140.0
	4,6-Dinitro-o-cresol	534-52-1	0.28	160.0	1600.0
	1,4-Dinitrobenzene	100-25-4	0.32	2.3	23.0
	2,4-Dinitrophenol	51-28-5	0.12	160.0	1600.0
	2,4-Dinitrotoluene	121-14-2	0.32	140.0	1400.0
	2,6-Dinitrotoluene	606-20-2	0.55	28.0	280.0
	Dinoseb	88-85-7	0.066	2.5	25.0
	1,4-Dioxane	123-91-1	12.0	170.0	1700.0
	Diphenylamine	122-39-4	0.92	13.0	130.0
	1,2-Diphenylhydrazine	122-66-7	0.087	N/A	N/A
	Disulfoton	298-04-4	0.017	6.2	62.0
	Dithiocarbamates (total)	NCATS-001	0.028	28.0	280.0
	EPTC	759-94-4	0.042	1.4	14.0
	Endosulfan I	959-98-8	0.023	0.066	0.66
	Endosulfan II	33213-65-9	0.029	0.13	1.3
	Endosulfan sulfate	1031-07-8	0.029	0.13	1.3
	Endrin	72-20-8		0.13	1.3
	Endrin aldehyde	7421-93-4		0.13	1.3
	Ethyl acetate	141-78-6	0.34	33.0	330.0
	Ethyl benzene	100-41-4	0.057	10.0	100.0
	Ethyl ether	60-29-7	0.12	160.0	1600.0
	Ethyl methacrylate	97-63-2	0.14	160.0	1600.0
	Ethylene oxide	75-21-8		N/A	N/A
	Famphur	52-85-7		15.0	150.0
	Fluoranthene	206-44-0		3.4	34.0
	Fluorene	86-73-7		3.4	34.0
	Fluoride	16984-48-8		N/A	N/A
	Formetanate hydrochloride	23422-53-9		1.4	14.0
	Heptachlor (& its epoxide)	76-44-8	0.0012	0.066	0.66
	Heptachlor epoxide	1024-57-3	0.016	0.066	0.66
	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	0.000035	0.0025	0.025
	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4		0.0025	0.025
	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	0.000035	0.0025	0.025
	Hexachlorobenzene	118-74-1	0.055	10.0	100.0
	Hexachlorobutadiene	87-68-3	0.055	5.6	56.0
	Hexachlorocyclopentadiene	77-47-4		2.4	24.0
	Hexachloroethane	67-72-1	0.055	30.0	300.0
	Hexachloropropene	1888-71-7		30.0	300.0
	HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8		0.001	0.01
	HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1		0.001	0.01
	Indeno[1,2,3-cd]pyrene	193-39-5		3.4	34.0
	Iodomethane	74-88-4		65.0	650.0
	Isobutyl alcohol	78-83-1	5.6	170.0	1700.0
	Isodrin	465-73-6		0.066	0.66
	Isosafrole	120-58-1	0.081	2.6	26.0
	Kepone	143-50-0	0.0011	0.13	1.3
	Lindane (gamma-BHC)	58-89-9		0.066	0.66
	Mercury (Retort Residues)	7439-97-6*		0.2	2.0
	Methacrylonitrile	126-98-7		84.0	840.0
\square	Methanol	67-56-1	5.6	0.75	7.5
	Methapyrilene	91-80-5		1.5	15.0
	Methiocarb	2032-65-7		1.4	14.0
	Methomyl	16752-77-5		0.14	1.4
	Methoxychlor	72-43-5		0.18	1.8
	Methyl ethyl ketone	78-93-3		36.0	360.0
	Methyl isobutyl ketone	108-10-1		33.0	330.0
	Methyl methacrylate	80-62-6		160.0	1600.0
_		•	•	•	,

	Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
	Methyl methanesulfonate	66-27-3		N/A	N/A
	Methyl parathion	298-00-0	0.014	4.6	46.0
	3-Methylcholanthrene	56-49-5	0.0055	15.0	150.0
	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.5	30.0	300.0
V	Methylene chloride	75-09-2	0.089	30.0	300.0
	Metolcarb	1129-41-5	0.056	1.4	14.0
	Mexacarbate	315-18-4	0.056	1.4	14.0
	Molinate	2212-67-1	0.042	1.4	14.0
	N-Nitroso-di-n-butylamine	924-16-3	0.4	17.0	170.0
	N-Nitrosodiethylamine	55-18-5	0.4	28.0	280.0
	N-Nitrosodimethylamine	62-75-9	0.4	2.3	23.0
	N-Nitrosodiphenylamine	86-30-6	0.92	13.0	130.0
	N-Nitrosomethylethylamine	10595-95-6	0.4	2.3	23.0
	N-Nitrosomorpholine	59-89-2	0.4	2.3	23.0
	N-Nitrosopiperidine	100-75-4	0.013	35.0	350.0
	N-Nitrosopyrrolidine	930-55-2	0.013	35.0	350.0
	Naphthalene	91-20-3		5.6	56.0
	2-Naphthylamine	91-59-8		N/A	N/A
	5-Nitro-o-toluidine	99-55-8		28.0	280.0
	o-Nitroaniline	88-74-4	0.27	14.0	140.0
	p-Nitroaniline	100-01-6	0.028	28.0	280.0
	Nitrobenzene	98-95-3	0.068	14.0	140.0
	o-Nitrophenol	88-75-5		13.0	130.0
	p-Nitrophenol	100-02-7	0.12	29.0	290.0
	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9		0.005	0.05
	1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	0.000063	0.005	0.05
	Oxamyl	23135-22-0		0.28	2.8
	Parathion	56-38-2		4.6	46.0
	PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9		0.001	0.01
	PeCDFs (All Pentachlorodibenzo-furans)	30402-15-4	0.000035	0.001	0.01
	Pebulate	1114-71-2		1.4	14.0
<u> </u>	Pentachlorobenzene	608-93-5		10.0	100.0
	Pentachloroethane	76-01-7		6.0	60.0
_	Pentachloronitrobenzene	82-68-8		4.8	48.0
	Pentachlorophenol	87-86-5		7.4	74.0
	Phenacetin	62-44-2		16.0	160.0
	Phenanthrene	85-01-8		5.6	56.0
	Phenol	108-95-2		6.2	62.0
	1,3-Phenylenediamine	108-45-2	N/A	N/A	N/A
_	o-Phenylenediamine	95-54-5		N/A	N/A
	Phorate Physics and	298-02-2		4.6	46.0
	Phthalic anhydride	100-21-0		28.0	280.0
	Phthalic anhydride	85-44-9 57-47-6		28.0	280.0 14.0
	Physostigmine Physostigmine salicylate	57-47-6		1.4	14.0
	Promecarb	2631-37-0		1.4	14.0
	Pronamide	23950-58-5		1.5	15.0
	Propanenitrile	107-12-0		360.0	3600.0
	Propham	122-42-9		1.4	14.0
	Propoxur	114-26-1	0.056	1.4	14.0
	Prosulfocarb	52888-80-9		1.4	14.0
	Pyrene	129-00-0		8.2	82.0
	Pyridine	110-86-1	0.014	16.0	160.0
	Safrole	94-59-7	0.081	22.0	220.0
	Sulfide	18496-25-8		N/A	N/A
_	2,4,5-T	93-76-5		7.9	79.0
	TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5		0.001	0.01
	TCDFs (All Tetrachlorodibenzofurans)	30402-14-3		0.001	0.01
	2,4,5-TP (Silvex)	93-72-1		7.9	79.0
	13.46 (WCATS PA)	03 12-1	inted 2/4/2021 11.	•	Page 9 of 10

Organic Constituents	CASRN	Wastewater Standard (mg/L)	Non Wastewater Standard (mg/kg unless noted otherwise)	Hazardous Soil 10Xs UTS (mg/kg unless noted otherwise)
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14.0	140.0
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0	60.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0	60.0
Tetrachloroethylene	127-18-4	0.056	6.0	60.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.03	7.4	74.0
Thiodicarb	59669-26-0	0.019	1.4	14.0
Thiophanate-methyl	23564-05-8	0.056	1.4	14.0
Toluene	108-88-3	0.08	10.0	100.0
Total PCBs (Polychlorinated biphenyls)	1336-36-3	0.1	10.0	100.0
Toxaphene	8001-35-2	0.0095	2.6	26.0
Triallate	2303-17-5	0.042	1.4	14.0
Tribromomethane	75-25-2	0.63	15.0	150.0
2,4,6-Tribromophenol	118-79-6	0.035	7.4	74.0
1,1,2-Trichloro-1,2,2,-trifluoroethane	76-13-1	0.057	30.0	300.0
1,2,4-Trichlorobenzene	120-82-1	0.055	19.0	190.0
1,1,1-Trichloroethane	71-55-6	0.054	6.0	60.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0	60.0
Trichloroethylene	79-01-6	0.054	6.0	60.0
Trichloromonofluoromethane (R11)	75-69-4	0.02	30.0	300.0
2,4,5-Trichlorophenol	95-95-4	0.18	7.4	74.0
2,4,6-Trichlorophenol	88-06-2	0.035	7.4	74.0
1,2,3-Trichloropropane	96-18-4	0.85	30.0	300.0
Triethylamine	121-44-8	0.081	1.5	15.0
Tris(2,3-dibromopropyl) phosphate	126-72-7	0.11	0.1	1.0
Vernolate	1929-77-7	0.042	1.4	14.0
Vinyl chloride	75-01-4	0.27	6.0	60.0
Xylene	1330-20-7	0.32	30.0	300.0
2,4-Xylidine	95-68-1	0.01	0.66	6.6
Antimony	7440-36-0	1.9	1.15	11.5
Arsenic	7440-38-2	1.4	5.0	50.0
Barium	7440-39-3	1.2	21.0	210.0
Beryllium	7440-41-7	0.82	1.22	12.2
Cadmium	7440-43-9	0.69	0.11	1.1
Chromium	7440-47-3	2.77	0.6	6.0
Lead	7439-92-1	0.69	0.75	7.5
Mercury	7439-97-6	0.15	0.025	0.25
Nickel	7440-02-0	3.98	11.0	110.0
Selenium	7782-49-2	0.82	5.7	57.0
Silver	7440-22-4	0.43	0.14	1.4
Thallium	7440-28-0	1.4	0.2	2.0
Vanadium	7440-62-2	4.3	1.6	16.0
Zinc	7440-66-6	2.61	4.3	43.0

Attachment 1 - Additional Radionuclides

Please list the supplimentary radionuclides and their concentration values.



CONTAINER PROFILE W854060 CON-HAZ

WS ID: 45282 C ID: 854060 ACTIVE

GENERAL INFORMATION

Container ID: 854060

Labeled ID: W854060

Optional ID:

Chemical Barcode:

Physical State: LIQUID
Waste Stream ID: 45282

Work Path: CON-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 14-gallon poly

Origin Date: 22-Oct-2019 2:31 pm

Accum Start Date:

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: WILLIAM HOLLIS (113868)
Insert By: PHILIP MARTINEZ (208498)

Waste Desc: ORGANIC SOLVENT FOR PCB EXTRACTION

WEIGHTS AND VOLUMES

Container Volume: 14.00 gal **Gross Weight:** 41.00 lb

Waste Volume: 8.00 L Tare Weight: 10.00 lb

Net Weight: 31.00 lb

LOCATION

Pickup (Origin): LANL: 59: 000139

Current: VEOLIA-CO: OPER: RECV

				COS	ST CODES		
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
3C070A	X49G	0220	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST

	EPA CODES						
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory					
D001B	D001	Ignitable: High TOC Ignitable Characteristic Liquids- >= 10% total organic carbon.					
F002C	F002	Spent halogenated solvents: Methylene chloride					
F003A	F003	Spent non-halogenated solvents: Acetone					
F003G	F003	Spent non-halogenated solvents: Methanol					

UNDERLYING HAZARDOUS CONSTITUENTS

CAS No. Chemical Name



CONTAINER PROFILE W854059 ITEM-HAZ

WS ID: 45286 C ID: 854059 ACTIVE

GENERAL INFORMATION

Container ID: 854059

Labeled ID: W854059

Optional ID:

Chemical Barcode:

Physical State: SOLID

Waste Stream ID: 45286

Work Path: ITEM-HAZ

Quantity (Univ): 1

Compactible: NO

Status: ACTIVE

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 5-gallon poly

Origin Date: 22-Oct-2019 2:29 pm

Accum Start Date: 12-Nov-2019

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: WILLIAM HOLLIS (113868)
Insert By: PHILIP MARTINEZ (208498)

Waste Desc: SOLID WASTE FROM PCB COLUMN CLEANUP

WEIGHTS AND VOLUMES

Container Volume: 5.00 gal Gross Weight: 14.50 kg

Waste Volume: 1500.00 mL Tare Weight: 3.00 kg

Net Weight: 11.50 kg

LOCATION

Pickup (Origin): LANL: 59: 000139

Current: VEOLIA-CO: OPER: RECV

				COS	ST CODES		
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
3C070A	X49G	0220	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST

		EPA CODES	
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory	
F002C	F002	Spent halogenated solvents: Methylene chloride	

	DOT SHIPPING DESC
Status/ Manifest IDs	DOT Shipping Description
ACTIVE 108512 108682	NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, III, (LABPACK)



CONTAINER PROFILE W859264 CON-HAZ

WS ID: 47579 C ID: 859264 ACTIVE

GENERAL INFORMATION

Container ID: 859264

Labeled ID: W859264

Optional ID:

Chemical Barcode:

Waste Stream ID:

Physical State: LIQUID

Work Path: CON-HAZ

Quantity (Univ): 1

Quantity (Univ).

Compactible: NO

SENERAL INFORMATION

Status: ACTIVE

Decommissioned: YES

Container Type: DF: Fiberboard or plastic drums, barrels, kegs

Container Subtype: 14-gallon poly

Origin Date: 08-Sep-2020 3:05 pm

Accum Start Date: 06-Oct-2020

Closed Date:

Discard Matrix:

TID(s):

Gen Contact: DANIEL HUBER (342232)
Insert By: PHILIP MARTINEZ (208498)

47579

Waste Desc: ORGANIC SOLVENTS FOR PCB EXTRACTION

WEIGHTS AND VOLUMES

Container Volume: 14.00 gal Gro

Gross Weight: 40.50 lb

Waste Volume: 8.00 L Tare Weight: 10.00 lb

Net Weight: 30.50 lb

LOCATION

Pickup (Origin): LANL: 59: 000001

Current: VEOLIA-CO: OPER: RECV

				COS	ST CODES		
Cost Center	Prog Code	Cost Account	Work Package	Percent Allocation	Cost Center Status	Cost Code Status	Recharge Mode
3C070A	X49G	0220	0000	100.00	ACTIVE	ACTIVE	SELECTION LIST

	EPA CODES						
System Code	Hazardous Waste No.	Waste Description & Treatment Subcategory					
D001B	D001	Ignitable: High TOC Ignitable Characteristic Liquids- >= 10% total organic carbon.					
F002C	F002	Spent halogenated solvents: Methylene chloride					
F003A	F003	Spent non-halogenated solvents: Acetone					
F003G	F003	Spent non-halogenated solvents: Methanol					

UNDERLYING HAZARDOUS CONSTITUENTS

CAS No. Chemical Name



CONTAINER PROFILE W859264 CON-HAZ

WS ID: 47579 C ID: 859264 ACTIVE

	UNDERLYING HAZARDOUS CONSTITUENTS			
CAS No.	Chemical Name			
67-64-1	Acetone			
67-56-1	Methanol			
75-09-2	Methylene chloride			

	DOT SHIPPING DESC
Status/ Manifest IDs	DOT Shipping Description
ACTIVE 109784 109717	UN1992, WASTE FLAMMABLE LIQUIDS, TOXIC, N.O.S., 3 (6.1), II, (LABPACK)

TASK HISTORY						
Date/ Time	Task ID/ Status	Task Name/ Storage or Disposal Grid Location	Reject			
09/15/2020 7:53 AM	1902963 EXECUTED	LANL:59 - WDR-NRAD	NO			
10/06/2020 1:30 PM	1904331 EXECUTED	LANL:59 » 60:000017 (MANIF ID: 109717)	NO			
10/13/2020 1:08 PM	1881178 PENDING	LANL:60 - WALL2W - 000017	NO			
10/20/2020 1:55 PM	1905130 EXECUTED	LANL:60 » VEOLIA-CO:OPER:RECV (MANIF ID: 109784)	NO			

Note: Highlighted row indicates container was output or receiving container for the indicated task

DOCUMENTATION				
Doc. Number	Title	Uploaded By		
Doc-1	Container closure checklist	PHILIP MARTINEZ (208498)		

EDIT LOG					
Date Time/ User Name	Quality Record	Explanation			
10/06/2020 1:28 PM SUNEE SANDOVAL (193789)	YES	C_MASTER.ACCUM_START_DATETIME [859264] changed from null to 10-06-2020 01:28 PM			
10/06/2020 1:28 PM SUNEE SANDOVAL (193789)	NO	Edit Container Authorization; Locked Container. Looking for [P=303577, C=859264]; Found [P=303577, G=TSD-DOTQA]; Reason for Edit: ASD			
09/15/2020 7:53 AM PAUL NEWBERRY (112056)	NO	Edit Container Authorization; Locked Container. Looking for [P=42805, C=859264]; Found [P=42805, G=TSD-WDR-NR]; Reason for Edit: psn			
09/08/2020 3:24 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.VOL_WASTE [859264] changed from null to 8.0			
09/08/2020 3:24 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE [859264] changed from 13.834 to 30.5			
09/08/2020 3:24 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE_UNIT [859264] changed from kg to lb			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE [859264] changed from 8.37 to 13.834			



CONTAINER PROFILE W859264 CON-HAZ

WS ID: 47579 C ID: 859264 ACTIVE

EDIT LOG					
Date Time/ User Name	Quality Record	Explanation			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_TARE_UNIT [859264] changed from kg to lb			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE [859264] changed from 30.5 to 8.37			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE [859264] changed from 40.5 to 30.5			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_TARE [859264] changed from 0.0 to 10.0			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_WASTE [859264] changed from 0.0 to 40.5			
09/08/2020 3:23 PM PHILIP MARTINEZ (208498)	YES	C_MASTER.WEIGHT_GROSS [859264] changed from 0.0 to 40.5			
09/08/2020 3:15 PM PHILIP MARTINEZ (208498)	NO	Create Container Authorization; Looking for [P=318017, WS=47579, WP=233, U=2427]; Found [P=318017, W=1, F=69, U=ALL, B=2, G=59-WMC];			
09/08/2020 3:15 PM WCATS APPLICATION (000000)	NO	INITWORKPATH (C_ID=859264/PATH_ID=233): PASSED			