



US Ecology Nevada (Beatty) 800-239-3943  
 US Ecology Idaho (Grand View) 800-274-1516  
 US Ecology Texas (Robstown) 800-242-3209  
 US Ecology Michigan (Detroit) 800-396-3265

PROFILE # \_\_\_\_\_

**WASTE PROFILE FORM**

A. GENERATOR INFORMATION			
1. Generator: U.S. Army Corps of Engineers		<input type="checkbox"/> Billing information is same	<input checked="" type="checkbox"/> P.O. required for payment
2. Facility Address: Former Harshaw Chemical Company Site, 1000 Harvard Avenue, Cleveland, Ohio 44109-3048		12. Billing Company: Environmental Chemical Corporation, Inc. (ECC)	
3. Mailing Address: 1776 Niagara Street		13. Billing Address: 110 Fieldcrest Avenue, 2nd Floor, Suite 31	
4. City/State/Zip: Buffalo, NY 14207		14. City/State/Zip: Edison, NJ 08837	
5. Technical Contact: [REDACTED]		15. Billing Contact: [REDACTED]	
6. Phone: [REDACTED]		16. Phone: [REDACTED]	17. Fax: [REDACTED]
7. Fax: [REDACTED]		18. Email: [REDACTED]	
8. Generator Status: <input type="checkbox"/> CESQG <input type="checkbox"/> SQG <input checked="" type="checkbox"/> LQG			
9. EPA ID #: OHD987008745		10. State ID #: N/A	
11. SIC Codes: 9511		8999	
B. SHIPPING INFORMATION			
1. US DOT Shipping name: Various proper shipping names possible for Class 9 or 7 material with radioactive contamination; Non-regulated as well			
2. Hazard Class: 9 or 7	3. UN/NA #: Various	4. Packaging Group: Various	5. RQ: Possible
6. Container Type: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Totes <input type="checkbox"/> Pallet <input type="checkbox"/> Boxes <input type="checkbox"/> Drums <input type="checkbox"/> Other, Describe:			
7. Frequency: <input type="checkbox"/> Year <input type="checkbox"/> Quarterly <input type="checkbox"/> Monthly <input type="checkbox"/> 1 time <input checked="" type="checkbox"/> Other, Describe: high frequency for several months			
8. Shipment: Size: Intermodals		Quantity: 3000 CY	9. Waste Import: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If yes, complete Waste Import Supplement)</i>
C. GENERAL MATERIAL & REGULATORY INFORMATION			
1. Common name for this waste: Construction Debris contaminated with radiological material			
2. Process generating the material: Demolition of former process building G-1. The former chemical company produced a number of uranium products in various forms. Major products included uranium tetrafluoride, uranium hexafluoride, and uranium trioxide.			
3. Describe physical appearance and odor of the waste: Construction debris shall consist of wood, steel, concrete, concrete masonry units, bricks, insulation materials, roofing materials, personal protective equipment and other low density debris (plastic), and incidental soil and asphalt.			
4. Odor of the waste: <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Strong		5. Physical State: <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge/Slurry <input checked="" type="checkbox"/> Solid	
6. Describe Color: Grey with varied colors of debris		7. Liquid phases: <input type="checkbox"/> Single <input type="checkbox"/> Double Layer <input type="checkbox"/> Multi-layer	
8. Knowledge is from: <input type="checkbox"/> Lab analysis <input type="checkbox"/> MSDS <input checked="" type="checkbox"/> Process/generator knowledge			
9. Waste Type (US Ecology Texas customers only): <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Industrial <input type="checkbox"/> Non-Industrial			
10. Is the waste restricted under EPA Land Disposal Restrictions (§268)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
11. If LDR "Yes", is waste: <input type="checkbox"/> Wastewater <input type="checkbox"/> Non-wastewater <input type="checkbox"/> Debris (§268.2)		12. Alt. Standards for soil? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
13. Is the waste RCRA hazardous waste containing benzene and originating at a Petroleum Refinery (SIC 2911), Chemical Manufacturing Plant (SIC 2800 thru 2899) or Coke by-Product Recovery Plant (SIC 3312)? <i>(If yes, complete Benzene Waste Operations Supplement Form and Thermal Supplement Form):</i> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
14. VO Conc.(§264.1083): <input checked="" type="checkbox"/> <500 ppmw <input type="checkbox"/> ≥500ppmw		15. Has waste been treated after point of generation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
16. CERCLA Regulated (Superfund) Waste: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		17. Butadiene waste regulated by §63 Subpart XX: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
18. Waste contains UHC constituent(s) (§268.48), above a treatment standard, other than those for which the waste exhibits a characteristic. <i>(If yes, list all UHC's in Section D):</i> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
19. Waste exempt from definition of "solid waste" or "hazardous waste" <i>(If yes, list reference 40CFR _____):</i> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
20. State Waste Codes:			
21. RCRA Waste Codes:			
22. Source Code: N/A		23. Form Code: N/A	
24. Management Code: H _____ (USE only)			

**D. MATERIAL COMPOSITION** (use additional form if necessary)

Values are: <input type="checkbox"/> TCLP <input checked="" type="checkbox"/> TOTALS		Range total ≥ 100%		
Constituent	Units	Typical	Min	Max
Concrete/Masonry Material (including bricks)	%	70	0	100
Wood	%	10	0	100
Metal (steel, iron, copper)	%	10	0	100
Soil	%	1	0	20
Asphalt	%	1	0	20
PPE	%	2	0	50
Other low density debris (fiberglass, paper, plastic, glass, roofing materials, insulation)	%	10	0	100

**E. WASTE CHARACTERISTICS**

1. Oxidizer <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9. Reactive sulfides _____ ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Explosive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10. Reactive cyanides _____ ppm <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Organic peroxide <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	11. Water/air reactive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
4. Shock sensitive <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12. Thermally unstable <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Tires <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	13. TSCA regulated PCB waste (control sheet required with shipment) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. Pyrophoric <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Medical/infectious waste <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7. Compressed gas <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Radioactive (If yes, complete Profile Supplement for Radioactive Waste) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
8. Halogenated organics <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
16. Possibility of incidental liquids from transportation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
17. Is waste a solid using the paint filter test? <input checked="" type="checkbox"/> Yes (solid) <input type="checkbox"/> No (not solid)	
18. pH: (If solid, what is pH if mixed with water?) Range _____ to _____ Typical _____ <input type="checkbox"/> ≤ 2 <input checked="" type="checkbox"/> 2 < 12.5 <input type="checkbox"/> ≥ 12.5	
19. Flash Point: >400 ° F <input type="checkbox"/> < 140 ° F	


**F. GENERATOR'S CERTIFICATION**

Yes  No I certify this material may be disposed without further treatment.

I authorize US Ecology to correct inconsistencies on the waste profile form that impact waste management decisions with my oral or written authorization. US Ecology will require re-submittal of the waste profile information if substantial changes are determined necessary. I understand material that does not conform to specifications described in this profile may be rejected by US Ecology unless other contractual arrangements have been agreed to by both parties. I certify, under penalty of law, that I am familiar with this waste stream through analysis and/or process knowledge, and that all information provided is true, accurate, representative and complete, that all known or suspected hazards have been disclosed, and that this form was completed in accordance with the instructions provided.

Print Name 		Title Health Physicist	Date 11/13/2014
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**PROFILE#** \_\_\_\_\_

A. GENERATOR INFORMATION		B. DISPOSAL SITE	
1. Generator:	U.S. Army Corps of Engineers	<input checked="" type="checkbox"/>	US Ecology Idaho (complete Pgs 1 <u>and</u> 2)
2. Common Name of Material:	Construction Debris with radiological constituents	<input type="checkbox"/>	US Ecology Nevada (Complete Pg 1 <u>only</u> )
3. Material Description:	Concrete, metal, wood with U, TH, and Ra-228	<input type="checkbox"/>	US Ecology Texas (Complete Pg 1 <u>only</u> )
<b>C. Generally Exempt Unimportant Quantities of Source Material Uniformly Dispersed in Soil or other Media (&lt; 0.05% by weight)</b>			
<b>1. Complete this Section if waste is being profiled as <u>generally exempt</u> source material. Does the material contain? (check all that apply)</b>			
<input type="checkbox"/> Natural, Refined, or Depleted Uranium		<input type="checkbox"/> Thorium (Th-232)	
<input checked="" type="checkbox"/> Both Uranium and Thorium			
<b>2. Source Material Sum of Fractions (SOF) Formulas:</b>			
Natural Uranium + Thorium		Refined Uranium + Thorium	
$\frac{Conc_{U-238}}{167pCi/g} + \frac{Conc_{Th-232}}{55pCi/g} \leq 1$		$\frac{Conc_{U-Total}}{333pCi/g} + \frac{Conc_{Th-Total}}{110pCi/g} \leq 1$	
Depleted Uranium + Thorium		$\frac{Conc_{U-238}}{169pCi/g} + \frac{Conc_{Th-232}}{55pCi/g} \leq 1$	
<b>Notes:</b>			
1. Unless otherwise noted, use parent nuclide in equations		5. Refined Uranium refers to chemical forms where the equilibrium state of the uranium decay chain has been disrupted.	
2. Th-232 will routinely be considered to be in equilibrium with all progeny.		6. Depleted Uranium contains U-235 at < 0.71% by weight	
3. Total Uranium = U-234 + U-235 + U-238.			
4. Total Thorium = Th-232 + Th-228			
<b>3. Use this space to perform source material SOF calculations: (if waste only contains U or Th, enter zero for other nuclide)</b>			
325 pCi/g U-Total/333 pCi/g = 0.976; 1.39 pCi/g Th-Total/110 pCi/gram = 0.013; SOF = 0.976+0.013 = 0.989			
<b>D. NORM other than Uranium and Thorium Uniformly Dispersed in Soil or Other Media</b>			
1. Does the waste contain:	<input checked="" type="checkbox"/> Ra-226 / Ra-228	<input type="checkbox"/> Pb-210	<input type="checkbox"/> K-40
			<input type="checkbox"/> Other(s)
2. Waste Concentration (pCi/g):	0.5		
Site Limits:	USEI	500 / 1500 <sup>(4)</sup>	1500
(all in pCi/g)	USEN	5 <sup>(2)</sup>	N/A
	USET	30 <sup>(3)</sup>	150
			818 <sup>(4)</sup>
See Site WAC or State Exemption regulations			
<b>Notes(s):</b>			
1. Limits are for Ra-226+Ra-228 combined. 500 pCi/g is for bulk loads, up to 1500 pCi/g requires sealed IP-1 package.			
2. USEN limit is for Ra-226 only.			
3. Limits are for Ra-226 or Ra-228. See TCEQ regulations for other NORM exemptions.			
4. K-40 may not be enriched beyond its natural concentration.			
<b>E. NRC or Agreement State Exempted Products, Devices, or Items</b>			
1. Type of exempt item(s) or product(s)	N/A	No. of Items: _____	<input type="checkbox"/> Check if additional inventory information is attached.
2. The items are exempt under: _____			
(cite regulatory reference, i.e. 10CFR30.14)			
<b>Notes:</b>			
1. Material must be transported in accordance with DOT Rules and Regulations.			
2. The generator must provide an estimated inventory of activity, by isotope, for each container.			
3. Individual packages may bear White I or Yellow II Labels as long as the maximum surface dose rate on any package does not exceed 10 mrem/hr.			
4. Am-241 based smoke detectors are prohibited from disposal at USEN.			
<b>F. CERTIFICATION STATEMENT:</b>			
I certify that the contents of the package(s) being shipped to <u>Idaho</u> are not licensed or regulated at the point of generation by the US Nuclear Regulatory Commission or an Agreement State, in accordance with <u>10 CFR 40.13(a)</u> (cite regulation or other document that confirms materials are not licensed by the NRC or an agreement state).			
			
(ON BEHALF OF USACE)		11/13/2014	
Signature		Date	

UNIFORM RADIOACTIVE WASTE ACCEPTANCE CRITERIA SUPPLEMENT

PROFILE# \_\_\_\_\_

ADDITIONAL RAD SUPPLEMENT QUESTIONS FOR SHIPMENTS TO US ECOLOGY IDAHO ONLY				
<b>G. Particle Accelerator Produced Radioactive Material (NARM) (USEI WAC Table C.3)</b>				
1. Was the waste generated in a particle accelerator? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
2. Estimated inventory of activity, by isotope, for each container: <u>U-Total 0.005 Ci, Th-232 9.85E-06 Ci, Ra-228 7.86E-06 Ci</u> Notes: <ul style="list-style-type: none"> <li>• Dose rate may not exceed 10 mrem/hr at any point on the package surface.</li> <li>• Containers must be at least 90% full.</li> </ul>				
<b>H. Materials Specifically Exempted by the NRC or NRC Agreement State (USEI WAC Table C.4b)</b>				
1.	Is the material approved for disposal in accordance with 20.2008(b) or equivalent Agreement State regulation? <i>If yes, provide a copy of the exemption.</i>	Yes	<input type="checkbox"/>	No <input checked="" type="checkbox"/>
2.	Has the waste been approved by the NRC or an Agreement State for alternative disposal in accordance with 10CFR 20.2002 or an Agreement State equivalent regulation? <i>If yes, provide a copy of the approval request, NRC exemption, and applicable SER/FONSI.</i>	Yes	<input type="checkbox"/>	No <input checked="" type="checkbox"/>
3.	Was the material approved for alternate disposal via a decommissioning plan or license amendment? <i>If yes, provide a copy of the license or plan.</i>	Yes	<input type="checkbox"/>	No <input checked="" type="checkbox"/>
4.	Is the material acceptable under USEI Table C.4b <u>as not licensed or regulated by the NRC or Agreement State under the Atomic Energy Act?</u> <i>If yes, provide documentation that the radioactive material is unlicensed and refer to the applicable section(s) below (4a – 4c):</i>	Yes	<input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<b>Exempt Material</b>	<b>WAC Limit</b>		
4a.	Byproduct Material (Exempt per 10CFR30.11 or equivalent)	Sum of all isotopes < 3,000 pCi/g		
4b.	Source Material (Exempt per 10CFR40.14 or equivalent)	Sum of all isotopes < 3,000 pCi/g. If waste contains <u>both uranium and thorium</u> , a sum of fractions (SOF) must be calculated using the limits provided below: <ul style="list-style-type: none"> <li>• <b>Natural Uranium (in equil):</b> <u>U-238 Limit = 214 pCi/g</u> <i>(U-238 * 14 decay progeny &lt; 3,000 pCi/g)</i></li> <li>• <b>Depleted Uranium:</b> <u>U-238 Limit = 877 pCi/g</u> <i>(Only contains U-238, Th-234, Pa-234m, U-235, and U-234)</i></li> <li>• <b>Natural Thorium (in equil):</b> <u>Th-232 Limit = 272 pCi/g</u> <i>(Th-232 * 11 decay progeny &lt; 3,000 pCi/g)</i></li> </ul> <u>Use this space for SOF calculations:</u>		
4c.	Special Nuclear Material (Exempt per 10CFR 70.17)	Sum of all isotopes < 3,000 pCi/g		

For US Ecology Idaho use only:	
Which of the USEI WAC Tables apply to this profile? (Check all that apply)	Waste Type (check only one)
<input type="checkbox"/> Table C.1 - Unimportant Quantities of Source Material Uniformly Dispersed in Soil or other Media	<input type="checkbox"/> FUSRAP
<input type="checkbox"/> Table C.2 - NORM other than Uranium and Thorium Uniformly Dispersed in Soil or Other Media	<input type="checkbox"/> RADIOACTIVE NON-FUSRAP
<input type="checkbox"/> Table C.3 - Particle Accelerator Produced Radioactive Material (NARM)	<input type="checkbox"/> RADIOACTIVE EXEMPT ACCEL
<input type="checkbox"/> Table C.4a - NRC Exempted Products, Devices, or Items	
<input type="checkbox"/> Table C.4b - Materials Specifically Exempted by the US NRC or an NRC Agreement State	