

Beneficial Use Determination: Solid By-Product Management Plan Analytical Testing Report

Beneficial Use ID#: _____ -BUD- _____ - _____
 DNR Certified Lab: _____
 Lab Report Date: _____
 By-Product Generator: _____
 City: _____ State: _____ Zip: _____
 By-Product Name: _____

Send completed report form(s), laboratory analytics, and supplemental Solid By-Product Management Plan (SBMP) documentation to:

Iowa Department of Natural Resources
 Land Quality Bureau
 Solid Waste Section
 502 E 9th St
 Des Moines, IA 50319-0034

For questions concerning this report form please contact the DNR at (515) 201-8272.

ANALYTICAL TESTING RESULTS

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).

Required		Synthetic Precipitation Leaching Procedure (EPA Test Method 1312)			Total Metals		
*	Contaminant	MCL	10 X MCL	Test Result	Regulatory Limit	Test Result	
<input type="checkbox"/>	Antimony	0.006 mg/L	0.06 mg/L	mg/L	31 mg/kg		mg/kg
<input type="checkbox"/>	Arsenic	0.010 mg/L	0.10 mg/L	mg/L	17 mg/kg		mg/kg
<input type="checkbox"/>	Barium	2.0 mg/L	20.0 mg/L	mg/L	15,000 mg/kg		mg/kg
<input type="checkbox"/>	Beryllium	0.004 mg/L	0.04 mg/L	mg/L	110 mg/kg		mg/kg
<input type="checkbox"/>	Boron				16,000 mg/kg		mg/kg
<input type="checkbox"/>	Cadmium	0.005 mg/L	0.05 mg/L	mg/L	70 mg/kg		mg/kg
<input type="checkbox"/>	Chromium	0.1 mg/L	1.0 mg/L	mg/L	** (Total)		mg/kg
					(Hexavalent - VI)		mg/kg
					(Trivalent - III)		mg/kg
<input type="checkbox"/>	Cobalt				23 mg/kg		mg/kg
<input type="checkbox"/>	Copper	1.3 mg/L	13.0 mg/L	mg/L	15,000 mg/kg		mg/kg
<input type="checkbox"/>	Fluoride	4.0 mg/L	40.0 mg/L	mg/L	4,700 mg/kg		mg/kg
<input type="checkbox"/>	Lead	0.015 mg/L	0.15 mg/L	mg/L	400 mg/kg		mg/kg
<input type="checkbox"/>	Lithium				160 mg/kg		mg/kg
<input type="checkbox"/>	Manganese				10,000 mg/kg		mg/kg
<input type="checkbox"/>	Mercury	0.002 mg/L	0.02 mg/L	mg/L	23 mg/kg		mg/kg
<input type="checkbox"/>	Molybdenum				390 mg/kg		mg/kg
<input type="checkbox"/>	Nickel				1,500 mg/kg		mg/kg
<input type="checkbox"/>	Selenium	0.05 mg/L	0.5 mg/L	mg/L	390 mg/kg		mg/kg
<input type="checkbox"/>	Silver				370 mg/kg		mg/kg
<input type="checkbox"/>	Thallium	0.002 mg/L	0.02 mg/L	mg/L	0.78 mg/kg		mg/kg
<input type="checkbox"/>	Vanadium				350 mg/kg		mg/kg
<input type="checkbox"/>	Zinc				23,000 mg/kg		mg/kg

*Required contaminant

**If Total Chromium ≥ 210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results.

Toxicity Characteristic Leaching Procedure (EPA Test Method 1311) - [Regulatory Limits](#)

Metals				Volatile Organic Compounds			
*	Contaminant	Regulatory Limit	Test Result	*	Contaminant	Regulatory Limit	Test Result
<input type="checkbox"/>	Arsenic	5.0 mg/L	mg/L	<input type="checkbox"/>	Benzene	0.5 mg/L	mg/L
<input type="checkbox"/>	Barium	100.0 mg/L	mg/L	<input type="checkbox"/>	Carbon tetrachloride	0.5 mg/L	mg/L
<input type="checkbox"/>	Cadmium	1.0 mg/L	mg/L	<input type="checkbox"/>	Chlorobenzene	100.0 mg/L	mg/L
<input type="checkbox"/>	Chromium	5.0 mg/L	mg/L	<input type="checkbox"/>	Chloroform	6.0 mg/L	mg/L
<input type="checkbox"/>	Lead	5.0 mg/L	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L	mg/L
<input type="checkbox"/>	Mercury	0.2 mg/L	mg/L	<input type="checkbox"/>	1,1-Dichloroethylene	0.7 mg/L	mg/L
<input type="checkbox"/>	Selenium	1.0 mg/L	mg/L	<input type="checkbox"/>	Methyl ethyl ketone	200.0 mg/L	mg/L
<input type="checkbox"/>	Silver	5.0 mg/L	mg/L	<input type="checkbox"/>	Tetrachloroethylene	0.7 mg/L	mg/L
				<input type="checkbox"/>	Trichloroethylene	0.5 mg/L	mg/L
				<input type="checkbox"/>	Vinyl chloride	0.2 mg/L	mg/L
Pesticides				Semi-Volatile Organic Compounds			
*	Contaminant	Regulatory Limit	Test Result	*	Contaminant	Regulatory Limit	Test Result
<input type="checkbox"/>	Chlordane	0.03 mg/L	mg/L	<input type="checkbox"/>	o-Cresol	200.0 mg/L	mg/L
<input type="checkbox"/>	Endrin	0.02 mg/L	mg/L	<input type="checkbox"/>	m-Cresol	200.0 mg/L	mg/L
<input type="checkbox"/>	Heptachlor (and its epoxide)	0.008 mg/L	mg/L	<input type="checkbox"/>	p-Cresol	200.0 mg/L	mg/L
<input type="checkbox"/>	Lindane	0.4 mg/L	mg/L	<input type="checkbox"/>	Cresol	200.0 mg/L	mg/L
<input type="checkbox"/>	Methoxychlor	10.0 mg/L	mg/L	<input type="checkbox"/>	1,4-Dichlorobenzene	7.5 mg/L	mg/L
<input type="checkbox"/>	Toxaphene	0.5 mg/L	mg/L	<input type="checkbox"/>	2,4-Dinitrotoluene	0.13 mg/L	mg/L
				<input type="checkbox"/>	Hexachlorobenzene	0.13 mg/L	mg/L
				<input type="checkbox"/>	Hexachlorobutadiene	0.5 mg/L	mg/L
				<input type="checkbox"/>	Hexachloroethane	3.0 mg/L	mg/L
Herbicides				<input type="checkbox"/>	Nitrobenzene	2.0 mg/L	mg/L
*	Contaminant	Regulatory Limit	Test Result	<input type="checkbox"/>	Pentachlorophenol	100.0 mg/L	mg/L
<input type="checkbox"/>	2,4-D	10.0 mg/L	mg/L	<input type="checkbox"/>	Pyridine	5.0 mg/L	mg/L
<input type="checkbox"/>	2,4,5-TP (Silvex)	1.0 mg/L	mg/L	<input type="checkbox"/>	2,4,5-Trichlorophenol	400.0 mg/L	mg/L
				<input type="checkbox"/>	2,4,6-Trichlorophenol	2.0 mg/L	mg/L

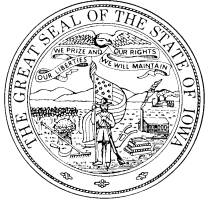
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BY-PRODUCT GENERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____ Date: _____

Printed Name: _____ Title: _____



Beneficial Use Determination: Solid By-Product Management Plan Analytical Testing Report

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ANALYTICAL TESTING RESULTS

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846).

Required		Synthetic Precipitation Leaching Procedure (EPA Test Method 1312)			Total Metals		
*	Contaminant	MCL	10 X MCL	Test Result	Regulatory Limit	Test Result	
<input type="checkbox"/>	Antimony	0.006 mg/L	0.06 mg/L	mg/L	31 mg/kg		mg/kg
<input type="checkbox"/>	Arsenic	0.010 mg/L	0.10 mg/L	mg/L	17 mg/kg		mg/kg
<input type="checkbox"/>	Barium	2.0 mg/L	20.0 mg/L	mg/L	15,000 mg/kg		mg/kg
<input type="checkbox"/>	Beryllium	0.004 mg/L	0.04 mg/L	mg/L	110 mg/kg		mg/kg
<input type="checkbox"/>	Boron				16,000 mg/kg		mg/kg
<input type="checkbox"/>	Cadmium	0.005 mg/L	0.05 mg/L	mg/L	70 mg/kg		mg/kg
<input type="checkbox"/>	Chromium	0.1 mg/L	1.0 mg/L	mg/L	** (Total)		mg/kg
					(Hexavalent - VI)		mg/kg
					(Trivalent - III)		mg/kg
<input type="checkbox"/>	Cobalt				23 mg/kg		mg/kg
<input type="checkbox"/>	Copper	1.3 mg/L	13.0 mg/L	mg/L	15,000 mg/kg		mg/kg
<input type="checkbox"/>	Fluoride	4.0 mg/L	40.0 mg/L	mg/L	4,700 mg/kg		mg/kg
<input type="checkbox"/>	Lead	0.015 mg/L	0.15 mg/L	mg/L	400 mg/kg		mg/kg
<input type="checkbox"/>	Lithium				160 mg/kg		mg/kg
<input type="checkbox"/>	Manganese				10,000 mg/kg		mg/kg
<input type="checkbox"/>	Mercury	0.002 mg/L	0.02 mg/L	mg/L	23 mg/kg		mg/kg
<input type="checkbox"/>	Molybdenum				390 mg/kg		mg/kg
<input type="checkbox"/>	Nickel				1,500 mg/kg		mg/kg
<input type="checkbox"/>	Selenium	0.05 mg/L	0.5 mg/L	mg/L	390 mg/kg		mg/kg
<input type="checkbox"/>	Silver				370 mg/kg		mg/kg
<input type="checkbox"/>	Thallium	0.002 mg/L	0.02 mg/L	mg/L	0.78 mg/kg		mg/kg
<input type="checkbox"/>	Vanadium				350 mg/kg		mg/kg
<input type="checkbox"/>	Zinc				23,000 mg/kg		mg/kg

*Required contaminant

**If Total Chromium ≥210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results.

Toxicity Characteristic Leaching Procedure (EPA Test Method 1311) - [Regulatory Limits](#)

Metals				Volatile Organic Compounds			
*	Contaminant	Regulatory Limit	Test Result	*	Contaminant	Regulatory Limit	Test Result
<input type="checkbox"/>	Arsenic	5.0 mg/L	mg/L	<input type="checkbox"/>	Benzene	0.5 mg/L	mg/L
<input type="checkbox"/>	Barium	100.0 mg/L	mg/L	<input type="checkbox"/>	Carbon tetrachloride	0.5 mg/L	mg/L
<input type="checkbox"/>	Cadmium	1.0 mg/L	mg/L	<input type="checkbox"/>	Chlorobenzene	100.0 mg/L	mg/L
<input type="checkbox"/>	Chromium	5.0 mg/L	mg/L	<input type="checkbox"/>	Chloroform	6.0 mg/L	mg/L
<input type="checkbox"/>	Lead	5.0 mg/L	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L	mg/L
<input type="checkbox"/>	Mercury	0.2 mg/L	mg/L	<input type="checkbox"/>	1,1-Dichloroethylene	0.7 mg/L	mg/L
<input type="checkbox"/>	Selenium	1.0 mg/L	mg/L	<input type="checkbox"/>	Methyl ethyl ketone	200.0 mg/L	mg/L
<input type="checkbox"/>	Silver	5.0 mg/L	mg/L	<input type="checkbox"/>	Tetrachloroethylene	0.7 mg/L	mg/L
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Pesticides				Semi-Volatile Organic Compounds			
*	Contaminant	Regulatory Limit	Test Result	*	Contaminant	Regulatory Limit	Test Result
<input type="checkbox"/>	Chlordane	0.03 mg/L	mg/L	<input type="checkbox"/>	o-Cresol	200.0 mg/L	mg/L
<input type="checkbox"/>	Endrin	0.02 mg/L	mg/L	<input type="checkbox"/>	m-Cresol	200.0 mg/L	mg/L
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<input type="checkbox"/>	Methoxychlor	10.0 mg/L	mg/L	<input type="checkbox"/>	1,4-Dichlorobenzene	7.5 mg/L	mg/L
<input type="checkbox"/>	Toxaphene	0.5 mg/L	mg/L	<input type="checkbox"/>	2,4-Dinitrotoluene	0.13 mg/L	mg/L
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				<input type="checkbox"/>	Hexachlorobutadiene	0.5 mg/L	mg/L
				<input type="checkbox"/>	Hexachloroethane	3.0 mg/L	mg/L
Herbicides				<input type="checkbox"/>	Nitrobenzene	2.0 mg/L	mg/L
*	Contaminant	Regulatory Limit	Test Result	<input type="checkbox"/>	Pentachlorophenol	100.0 mg/L	mg/L
<input type="checkbox"/>	2,4-D	10.0 mg/L	mg/L	<input type="checkbox"/>	Pyridine	5.0 mg/L	mg/L
<input type="checkbox"/>	2,4,5-TP (Silvex)	1.0 mg/L	mg/L	<input type="checkbox"/>	2,4,5-Trichlorophenol	400.0 mg/L	mg/L
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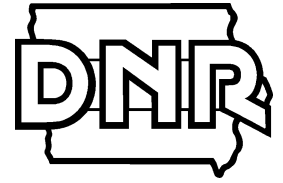
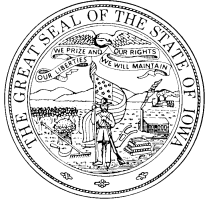
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<input type="checkbox"/>	Methoxychlor	10.0 mg/L	mg/L	<input type="checkbox"/>	1,4-Dichlorobenzene	7.5 mg/L	mg/L
<input type="checkbox"/>	Toxaphene	0.5 mg/L	mg/L	<input type="checkbox"/>	2,4-Dinitrotoluene	0.13 mg/L	mg/L
				<input type="checkbox"/>	Hexachlorobenzene	0.13 mg/L	mg/L
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