Abbreviations and Explanations

Tables 1 & 2 are condensed versions of the spreadsheets provided by EPA (available in Appendix A).
Below are explanations of the terms "proven" and "potential" provided by EPA and
a list of chemical abbreviations used in our tables.
See Appendix B for summaries of health effects for certain coal ash contaminants.

	Explanation of Terms
Proven	This table presents the damage cases designated by EPA as a "proven." A proven damage case means those cases where: (1) there were documented exceedances of primary MCLs or other health-based standards measured in ground water at sufficient distance from the waste management unit to indicate the hazardous constituents have migrated to the extent that they could cause human health concerns, (2) a scientific study provides documented evidence of another type of damage to human health or the environment (e.g., ecological damage), and/or (3) there has been an administrative ruling or court decisions with an explicit finding of specific damage to human health or the environment.
Potential	This table presents the damage cases designated by EPA as "potential." A potential damage case means those cases with: (1) documented exceedances of primary MCLs or other health-based standards only directly beneath or in very close proximity to the waste source, and/or (2) documented exceedances of secondary MCLs or other health-based standards on site or off site.

Ag	Silver	Cu	Copper	Sb	Antimony
Al	Aluminum	Fe	Iron	Se	Selenium
As	Arsenic	Hg	Mercury	Sf	Sulfate
B	Boron	Li	Lithium	TCE	Tri-chloroethylene
Ba	Barium	Mg	Magnesium	TDS	Total Dissolved Solids
Be	Beryllium	Mn	Manganese	Ti	Titanium
Ca	Calcium	Mo	Molybdenum	Tl	Thallium
Cd	Cadmium	Na	Sodium	TSS	Total Suspended Solids
Cl	Chlorides	Ni	Nickel	V	Vanadium
Co	Cobalt	Nitr	Nitrate/ Nitrite	Zn	Zinc
Cr	Chromium	Pb	Lead		

Table 1. 18 New Damage Cases Identified by EPA

	State	Facility	Type of Disposal Facilities	EPA's Key Reference(s)	Groundwater Contaminants	Surface Water Contaminants
1	IN	Gibson Generating Station Plant, Duke Energy (Cinergy)	2 Landfills, 6 Surface Impoundments, and a cooling resevoir	EIP's Out of Control #6	As, Se, B, Fe, Mn	As, Se, B, Fe, Mn
2	MI	JR Whiting generating Plant - CMS/Consumers Energy	6 Surface impoundments	CCW DC Ass #76 [According to ICF (6/2010)- "Rejected"]*		As, Se, Br (Oligochates); Se, Br, Co, Ni, Cr (Fish); As, Co, Se, Ni (Sediment)
3	MI	Detroit Edison Range Road Landfill	Landfill	EPA-HQ-RCRA-2009-0640-6815 Attachment 5; Becky Cuthbertson Email, 11/9/2010.***	B, Li, Mn, Sf, Fe	B, Li, Mn, Sf, Fe
4	MT	Colstrip PP, PPL Montana	2 surface impoundments	EIP's Out of Control #10	Se (?), B, Mo, Sf, TDS	Sf
5	NC	Swift Creek Structural Fill Site ReUse Techn	Structural fill	EIP's Out of Control #14	As, Pb, Hg, Ba, Sf	
6	NV	Reid Gardner Generating Nevada Energy	8 Surface impoundments and one landfill	EIP's Out of Control #18	As, Se, V, Cr, Mo, B, Cl, Mg, Mn, Ti, Na,	
7	NY	Cayuga Coal Ash Disposal LF, AES	One landfill and leachate pond	EIP's In Harm's Way #22	As, Cd, Se, Pb, B, Al, Mn, Sf, Fe, TDS	As, Cd, Se
8	PA	Bruce Mansfield First Energy's Power Station	Surface Impoundment	EIP's In Harm's Way #29	Cd, Ba, Pb, TSS, Al, Cl, Fe, Mn, Sf, TDS,	As, Se, Tl, Cd, Pb, Cr, Sb, B, pH
9	PA	Hatfield's Ferry Allegheny Energy Power Station	Landfill	EIP's In Harm's Way #30	As, Tl, Cr, Mo, B, Al, Fe, Mn, Sf, TDS	As, Tl, Cr, Mo, B, Al, Fe, Mn, Sf, TDS
10	PA	Fern Valley LF Orion Power Holdings	Landfill	EIP's Out of Control #22	As, B, Cl, Sf, TDS	As, Se, B, Cl, Sf, TDS
11	SC	Urquhart Station SCE&G	Landfill and two surface impoundments	EIP's Out of Control #26 [According to ICF (6/2010)**- "Rejected"]	As, Ni	As, Ba, Cr, Co, Hg, Ni, Zn, Mn (Soil)
12	TN	CCW LF Trans Ash Inc.	Landfill and surface	EIP's Out of Control #29	As, Cr, Pb, Hg, Ni, ag,	
13	TX	Southwestern Electric Power Welsh Reservoir	Cooling Reservoir	CCW DC Ass #21 [According to ICF (6/2010)**- "Rejected"]		Se
14	VA	Clinch River PP AEP-Appalachian Power (Carbo power plant)	Surface Impoundment	EIP's In Harm's Way #36		Al, pH
15	VA	Glen Lyn Plant, AEP/Appalachian Power	Two surface impoundments	In Harm's Way #37 [According to ICF (6/2010)- "Rejected"]		Cd, Se, Ni, TSS, pH, Thermal
16	WI	Columbia Energy Center Alliant Energy	Three surface impoundments	In Harm's Way #38		As, Cd, Cu, Cr, Ba, Al, Fe, Zn, Conduct

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	State	Facility	Type of Disposal Facilities	EPA's Key Reference(s)	Groundwater Contaminants	Surface Water Contaminants
17	WI	Oak Creek Power Plant – Wisconsin Energy/Wisconsin Electric Power (Caledonia)	Three landfills and one structural fill	In Harm's Way #39; Collapse coverage based on EPA Region 5 and WDNR cleanup bulletins and media coverage.	Mo, B, Mn, As, Hg, Sf, F	Cr, As, TCE, diesel
18	WV	John Amos PP, AEP/Appalachian Power	One landfill and two surface impoundments	Out of Control #30 [According to ICF (6/2010)**-"Rejected"]		Se, As

* As reported by EPA. Was also reported in EIP's Report, "In Harm's Way".

**According to EPA, it produced this damage case report in 2010, but it was never released to the public.

***http://www.michigan.gov/documents/deq/DNRE-WHMD-SW-DETROIT_EDISON_RANGE_ROAD_OpLicense_32005

Table 2. 49 New Potential Cases Identified by EPA

	State	Facility	Type of Disposal Facilities	EPA's Key Reference(s)	Groundwater Contaminants	Surface Water Contaminants
1	AR	Flint Creek Power Plant, SWEPCO (American Electric Power)	Landfill and 2 surface impoundments	In Harm's Way #1	Se, Fe, Mn, As, B, Mo, pH, Sulfate, TDS	Ba, B, Cr, Pb, Se, Sf, TDS, pH
2	AR	Independence Steam Station – Entrgy/AP&L	Landfill, three wastewater recycle and surge ponds	In Harm's Way #2	As, Cd, Pb, Fe, Mn, Sf, TDS, pH	
3	CT	Power Montville Generating Station - NRG Energy,	Surface impoundment, ash storage area	In Harm's Way #3	As, Be, Pb, Mn, pH	Cd, Cu, Ni, Zn, As, Be, Fe, Sf, TDS; As, Be, Pb (Soils)
4	DE	Indian River Power Plant – NRG Energy, Burton Island	Landfill and surface impoundment	Out of Control #1	As, Se, Cr, Tl	SW: Al, As, Ba, Fe; Sediments: As, Cd, Cr, Cu, Pb, Hg, Ni, Zn
5	FL	CD McIntosh Jr. Power Plant – City of Lakeland	2 landfills, sludge dewatering area, process wastewater ponds, artificial wetland	In Harm's Way #4	As, Pb, Se, Mn, Cd, V, Fe, Sf, Nitr, TDS	
6	FL	Curtis Stanton Energy Center, Orlando Utility Commission	Landfill and 3 runoff ponds	Out of Control #2	Gross Alpha, Ra-226, Al, Fe, Mn, V, Cl, Na, Sf, TDS, pH	Al, Na, Cl, Sf, Gross Alpha
7	FL	Seminole Generating Station – Seminole Electric Cooperative	Landfill and 5 runoff and process ponds	Out of Control #3	As, Pb, B, Fe, Cl, Sf, TDS	As, B, Al
8	FL	Big Bend Station – Tampa Electric Co.	Landfill, 4 surface impoundments, FGD storage area	Out of Control #4	As, Tl, Mn, Sf, Cl	B, Fe, TSS
9	IA	George Neal Station North Landfill - MidAmerican Energy	Landfill and 3 surface impoundments	In Harm's Way #5	As, Fe, Mn, Sf	
10	IA	George Neal Station South Ash Monofill - MidAmerican Energy,	Landfill	In Harm's Way #6	As, Fe, Mn, Sf, Ba, Se, Zn	
11	IL	Venice Power Station – Union Electric/Ameren/Amere	Three surface impoundments	In Harm's Way #10	As, Cd, Fe, Mn, B, TDS	
12	IL	Joliet Generating Station 9 – Lincoln Stone Quarry Landfill - Midwest Generation	Landfill in former quarry and 2 surface impoundments	In Harm's Way #8	As, Se, Cd, Ba, Cu, B, Mo, Sf, Ammon, TDS, pH	
13	IL	Marion Plant - Southern Illinois Power Cooperative	Landfill and 7 surface impoundments	In Harm's Way #9	Cd, Fe, Sf, B	Al, B
14	KY	Mill Creek Station – Louisville Gas &Electric	3 Landfills, 1 surface impoundment, 4 FGD process ponds	In Harm's Way #11	As, Sf, TDS	

Table 2. 49 New Potential Cases Identified by EPA

	State	Facility	Type of Disposal Facilities	EPA's Key Reference(s)	Groundwater Contaminants	Surface Water Contaminants
15	KY	Shawnee Fossil Plant - TVA	2 landfills and two surface impoundments	In Harm's way #12	As, Se, Cr, Pb, Be, Co, Ni, Mo, V, Sulfate, TDS, B, pH	Reddish Leachate
16	KY	Spurlock Power Station - Eastern Kentucky Power Cooperative	Landfill and surface impoundment	In Harm's Way #13	As, Sf, TDS	
17	LA	Big Cajun 2 Power Plant – NRG/Louisiana Generating	5 Landfills and surge treatment ponds	In Harm's Way #14	Se, Ca, TDS	
18	LA	Dolet Hills Power Station - CLECO Power	Landfill and 9 surface impoundments	In Harm's Way #15	As, Pb, Se, Sf, Ca, TDS, pH, Alkalin, Sp. Conduct.	
19	LA	Rodemacher Power Station - CLECO Power	Landfill, leach pond, 2 surface impoundments, 4 other ponds	In Harm's Way #16	As, Pb, Cl, TDS, pH, Sf, Sp. Conduct.	
20	MD	Mirant Dickerson's Generation Station's Westland Disposal Site	Landfill, ash settling and leachate treatment ponds	BNA, 1/5/2011	Al, As, Ba, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Se, Zn, Cl, Sf	Al, As, Ba, Cd, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, Se, Zn, Cl, Sf, pH, TSS
21	MI	Marquette Board of Light & Power Pine Hill	Landfill	EPA-HQ-RCRA-2009-0640-6815, Attach #5	B, Li, Na	
22	MI	We Energies Presque Isle Power Plant	Landfill	EPA-HQ-RCRA-2009-0640-6815, Attach #5	B, Li, Na	
23	MI	Muskegon County Type II LF	Landfill	EPA-HQ-RCRA-2009-0640-6815, Attach #5	B, Mn	
24	MI	John Warden Ash Site	Landfill	EPA-HQ-RCRA-2009-0640-6815, Attach #5	B, Li	
25	MI	Consumers Energy J.H. Campbell	Surface impoundment	EPA-HQ-RCRA-2009-0640-6815, Attach #5	Se, B, Li, Sb	Se, B, Li, Sb
26	MI	Consumers Energy BC Cobb	Landfill	EPA-HQ-RCRA-2009-0640-6815, Attach #5	B, Li	
27	MI	Karn/Weadock Generating Facility – Consumer Energy	2 surface impoundments	Out of Control #9	As, B, (Hg, Li)	
28	NC	Dan River Steam Station - Duke Energy	Landfill and 2 surface impoundments	In Harm's Way #18	Pb, Cr, Ag, Fe, Sf	
29	NC	Sutton Steam Plant – Progress Energy	2 surface impoundments	Out of Control #11	As, Fe, Mn, B	
30	NC	Lee Steam Plant – Progress Energy	Surface impoundment	Out of Control #12	As, B, Mn, Fe, pH	
31	NC	Cape Fear Steam Plant – Progress Energy	5 surface impoundments	Out of Control #13	Pb, B, Cr, Fe, Mn, Sf	

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	State	Facility	Type of Disposal Facilities	EPA's Key Reference(s)	Groundwater Contaminants	Surface Water Contaminants
32	NC	Asheville Steam Electric Plant, Progress Energy	2 surface impoundments	Out of Control #16	Fe, Mn, B, pH (Cr, Pb, As, TDS)	
33	NE	Sheldon Station – Nebraska Public Power District	Landfill (closed)	In Harm's Way #21	Se, Sf, Cl	
34	OH	Cardinal Fly Ash Reservoir (FAR) 1 & 2 – AEP	Landfill and 2 surface impoundments	In Harm's Way #23	As, B, Mo	As, Mo
35	OH	General James M. Gavin Power Plant – AEP/Ohio Power	6 landfills and 2 surface impoundments	In Harm's Way #24	As, Ba, Cd, Pb, Mn, Mo, Gross Alpha, Cl, TDS	B, Al, Ni, Zn
36	OH	Muskingum River Plant – AEP/Ohio Power	Surface impoundment	In Harm's way #26	Ba, Fe, Sf, Gross Alpha, TDS	As, Ba, Hg, Sf
37	OK	Northeastern Station Ash LF, AEP/Public Service Co. of Okla	Landfill	In Harm's Way #27	As, Ba, Cr, Pb, Se, Tl, V, Sf, pH	
38	PA	Mitchell Power Station, Allegheny Energy	Landfill and 2 wastewater lagoons	Out of Control #19	As, B, Mo, Ni, Mn, Fe	
39	PA	Phillips Power Plant – Duquesne Light Co.	Landfill and 2 surface impoundments	Out of Control #20	Al, Mn, Cl, F, TDS	
40	PA	Seward Generating Station – RRI Energy, Inc.,	2 landfills (unpermitted), co-disposal ash/coal refuse pit	Out of Control #21	Sb, As, Cd, Cr, Pb, Se, Al, Fe, Mn, Ni, Zn, Cl, Sf, TDS	Al, Ni, Zn, Fe, Mn, pH
41	PA	Hunlock Power Station – UGI Development Co.	2 surface impoundments	Out of Control #23	As, Fe, Mn, Li, Ba, B	SW: As; Soil: As, Se
42	PA	Portland Generating Station's Bangor Quarry Ash Disposal Site – RRI Energy, Inc	Landfill (in quarry), stormwater sedimentation and leachate collection ponds	Out of Control #24	Al, Mn, Fe, F, Sf, TDS	Cr +6, Se, Cd, B
43	SC	Wateree Station – South Carolina Elctric & Gas	2 surface impoundments and additional waste units	Out of Control #25	As (Cr, Cd, Pb)	As
44	SC	Grainger Generating Station South Carolina Public Service Authority	2 surface impoundments	Out of Control #27	As, pH	
45	TN	Cumberland Steam Plant – TVA	2 surface impoundments and an ash stack	In Harm's Way #32	As, Se, B, Al, Fe, Mn, Cl, Sf, TDS	
46	TN	Gallatin Fossil Plant – TVA	3 surface impoundments	In Harm's Way #33	Cd, Hg, Be, B, Ni, Co, V, Fe, Mn, Sf, TDS	
47	TN	Johnsonville Fossil Plant – TVA	Landfill and 2 surface impoundments	In Harm's Way #34	As, Cd, Pb, B, Mo, Al, Fe, Mn, Sf, TDS, Co	Mn, Fe, Al

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48	TN	John Sevier Fossil Plant – TVA	2 surface impoundments (one converted into dry stacking)	Out of Control #28	Cd, Al, Mn, Sf	Cd, As, Mn
49	TX	Fayette Power Project (Sam Seymour) – Lower Colorado River Authority	Landfill and two surface impoundments	In Harm's Way #35	Se, Co, Mo, Al, V, Mn, Sf, Cl, TDS	