STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

August 23, 2012

Dear Resident,

The Missouri Department of Natural Resources' (Department) Spill Line received a call at 9:35 p.m. on June 28, 2012 regarding a fire at DeTray Plating Works, a plating facility located at 10406 East 11th Street in Independence, MO. The Independence Fire Chief reported that water used on the fire entered a ditch and then flowed into Crisp Lake.

Residents who live near Crisp Lake have expressed concerns to Department staff regarding potential contamination of the lake and their property as a result of this incident. This letter is intended to provide residents with information about the incident and the Department's subsequent efforts to determine whether and to what extent contamination might be present as a result. We have also established a webpage at http://dnr.mo.gov/env/hwp/detray.htm to provide updates and sampling data as it becomes finalized. The webpage includes contact information for Department staff, as well as Missouri Department of Health & Senior Services (DHSS) contacts, in case you have questions. For those residents without internet access, staff phone numbers are provided at the end of this letter.

Summary of the Incident and Department Response

The Department's Environmental Emergency Response staff arrived at DeTray Plating Works at 9 a.m. on June 29, 2012. By that time, the City of Independence had posted warning signs around Crisp Lake stating there had been a chemical spill and advising residents not to fish, swim or drink the lake water. DeTray Plating Works had installed a soil dam at the inlet to Crisp Lake to prevent water runoff from firefighting efforts from entering the lake. However, based on visual evidence, the Department found that water used on the fire had reached the lake before the dam was constructed.

Water that pooled behind the dam was recovered and pumped into plastic tanks, preventing further releases to the lake. Samples taken of this pooled water are shown on the attached tables. The data shows that water quality improved as work to clean up soil contamination progressed throughout the month of July.

To assess releases to soil, DeTray collected soil and sediment samples in the ditch leading from their facility to the dam and Crisp Lake. These samples were analyzed for numerous metals and cyanide. Department staff, as part of our oversight efforts, also collected water and soil samples

on the DeTray facility. The Department's samples were analyzed for metals and other chemicals associated with plating facilities. The results for these samples are in the attached table. As part of the Department's evaluation of the data, the water sample results were compared to Missouri Drinking Water Standards. In addition, since these metals are naturally occurring in the environment, the data was also compared to concentrations detected in nearby Doutts Lake, which was unaffected by the incident. The data for Doutts Lake is also included in the attached table. For evaluating soil and sediment samples, the Department uses the procedures and health-based standards found in Missouri's Risk Based Corrective Action (RBCA) document. For comparison purposes, these standards are provided in the attached table.

During the week of July 9, 2012, DeTray excavated and stockpiled 800 cubic yards of visibly contaminated soil on their property. In addition, DeTray continued to recover surface water that pooled behind the inlet dam, with a total of approximately 8,500 gallons collected to-date.

At the request of a nearby homeowner who was concerned that ash from the fire had contaminated their large home garden that was directly exposed to smoke, the Department additionally collected soil samples from that location. The sample results were provided to the homeowner and indicated the garden was unaffected by the fire. As part of this evaluation, the Department provided the sample results to the Missouri DHSS for their review. DHSS determined that since this garden soil did not show any impacts from the fire smoke, consumption of the fruits and vegetables grown in the garden is very unlikely to adversely affect health. It is also very unlikely that other soils, including gardens, in the neighborhood were impacted by the smoke and that consumption of home-grown fruits and vegetables would be negatively impacted.

Initial cleanup of the DeTray property and drainage areas that lead to Crisp Lake was completed on July 16, 2012. The efforts included cleanup of the ditch on DeTray's property and the culvert pipe that begins near the DeTray property and leads to the lake. Following these tasks, DeTray conducted sampling to assess the effectiveness of their cleanup efforts and to reassess Crisp Lake. The department received these sampling results on July 26, 2012. Based on the results, the Department asked DeTray to conduct additional investigation, including collecting additional samples, on and near their property. Department staff currently await these sample results.

Upon the Department's receipt of the results, this additional sample data will be uploaded to the previously referenced webpage. As a whole, the sample results will determine whether DeTray needs to conduct additional cleanup of their property, the drainage ditch, culvert pipe, or other off-site areas.

Next Steps
Current plans for the site include the disposal of stockpiled contaminated soil and water, further evaluation of Crisp Lake by reviewing sampling results, additional sampling if determined to be necessary, backfilling excavated areas with soil, and, placement of stone riprap to prevent future soil erosion, also if determined to be necessary.

The Department is communicating with DeTray regarding enrollment of the DeTray property into one of the Department's cleanup programs. This would provide for a more detailed analysis and, if warranted, further cleanup of the DeTray property and drainage areas after all emergency response activities are complete. This would also facilitate the Department's oversight of DeTray's continuing efforts to ensure contaminant concentrations on the property are safe for DeTray's workers, as well as neighbors. If sample results show concentrations of contaminants are elevated in Crisp Lake, the Department will work to address the problem.

A map of sampling locations and a table of sampling data comparing results to acceptable health-based standards are enclosed. This information is also available on the webpage at http://dnr.mo.gov/env/hwp/detray.htm. The webpage will be updated periodically as additional information becomes available.

If you have any questions now or in the future regarding this site, please contact Mr. Roarke Holzschuh, Environmental Services Program, State On-Scene Coordinator, by email at Roarke.Holzschuch@dnr.mo.gov or by phone at (816) 251-0710. You may also contact Mr. Tim Chibnall, Hazardous Waste Program, by email at Tim.Chibnall@dnr.mo.gov or (573) 751-3176.

Thank you for your interest in protecting the environment of the State of Missouri.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

Original signed by Aaron M. Schmidt

Aaron M. Schmidt, P.E.
Deputy Director

AMS/tcm

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Detray Plating Works

10406 East 11th Street, Independence, Missouri

Table 1 – Results for Water Samples

	Standard (ug/L)**	Doutts Lake Sample W-11 (ug/L)	Water behind dam Sample W-1 6/28/12	Water behind dam Sample W-2 7/2/12	Water behind dam Sample W-3 7/5/12	Water behind dam Sample W-4 7/7/12	Water behind dam Sample W-5 7/12/12	Water behind dam Sample W-6 7/30/12
Arsenic	10 *	2.5		1,300	2.06			6.5
Barium	2,000 *							190
Cadmium	5.0 *	0.034	2,170	2,500	336	130	5.0	38
Chromium III	100*	0.474		31,800	176	45	5.0	5.1
Copper	624	1.27	8,450	17,000	499	150	10	
Lead	15*	0.742		< 5.0	9,750	5.0	27	1.4
Mercury	NA	0.034		2	0.009	0.2	0.2	<0.038
Nickel	313	1.97	302,000	40,700	2,100	950	40	320
Silver	78	0.071		< 7.0				<0.68
Thallium	1.0	0.013		< 20				
Zinc	4,690	6.5			599	100	280	87
Cyanide	312	1.1	62,200	130,000		900	390	84
Chromium VI	0.0034	0.034		34,500	47.4	35	18	< 1.7

- *The standard is the Maximum Contaminant Level; all other standards developed using Missouri Risk-Based Corrective Action methodology.
- **ug/L is micrograms of the metal per liter of water and is also expressed as parts per billion.
- All sample results in units of ug/L.
- Shaded cells indicate the sample concentration exceeds the standard.

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Detray Plating Works

10406 East 11th Street, Independence, Missouri

Table 2 – Results for Water Samples

	Standard (ug/L)**	Doutts Lake Sample W-11 (ug/L)	Crisp Lake inlet mixing zone Sample W-7 6/28/12	Crisp Lake inlet mixing zone Sample W-8 7/5/12	Crisp Lake outfall – opposite inlet Sample W-9 6/28/12	Crisp Lake outfall – opposite inlet Sample W-10 7/5/12
Arsenic	10 *	2.5		3.61		4.9
Barium	2,000 *					
Cadmium	5.0 *	0.034	8,140	510	7.36	0.964
Chromium III	100*	0.474		374		4.39
Copper	624	1.27	10,800	423	8.31	8.94
Lead	15*	0.742		15.5		9.8
Mercury	NA	0.034		0.047		0.036
Nickel	313	1.97	36,300	3,030	14.2	14.7
Silver	78	0.071		0.785		0.071
Thallium	1.0	0.013		0.022		0.062
Zinc	4,690	6.5		667		97.2
Cyanide	312	1.1	68,700	2,270	< 3.0	< 0.054
Chromium VI	0.0034	0.034		2.5		< 0.018

- *
  Standard is the Maximum Contaminant Level; all other standards developed using Missouri Risk-Based Corrective Action methodology.
- **ug/L is micrograms of metal per liter of water and is also expressed as parts per billion.
- All sample results in units of ug/L.
- Shaded cells indicate the sample concentration exceeds the standard.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Detray Plating Works

10406 East 11th Street, Independence, Missouri

Table 3 – Results for Soil Samples

	Residential standard for surface soil (mg/kg)*	Industrial standard for surface soil (mg/kg)	Crisp Lake inlet above water line Sample S-1 7/5/12	Crisp Lake between lake and outfall Sample S-2 7/5/12
Arsenic	3.89	15.9	6.88	28
Barium	15,000	181,000		
Cadmium	16.8	74.8	682	4.54
Chromium III	74,600	472,000	1,050	8.04
Copper	3,040	38,100	1,270	48.7
Lead	260	660	160	33.8
Mercury	46.3	630	0.0133	0.0242
Nickel	1,510	18,600	2,750	47.5
Silver	374	4,480	2.17	0.17
Thallium	6.09	76.7	0.12	0.056
Zinc	22,800	288,000	8,170	809
Cyanide	1,220	12,300	2,479	0.66
Chromium VI	0.147	0.639	0.097	0.011

- *mg/kg means milligrams of metal per kilogram of soil and is also expressed as parts per million.
- All sample results in units of mg/kg.
- Light shading indicates concentration exceeds Default Target Level but is below non-residential standard.
- Dark shading indicates concentration exceeds both Default Target Level and non-residential standard.
- Default Target Level: The most conservative soil cleanup standard of the soil standards found in the Missouri Risk-Based Corrective Action guidance; the Default Target Level is protective of unrestricted land use and all soil exposure pathways.
- Non-residential standard for surface soil: A Missouri Risk-Based Corrective Action guidance standard based on non-residential land use and exposure to surface soil.

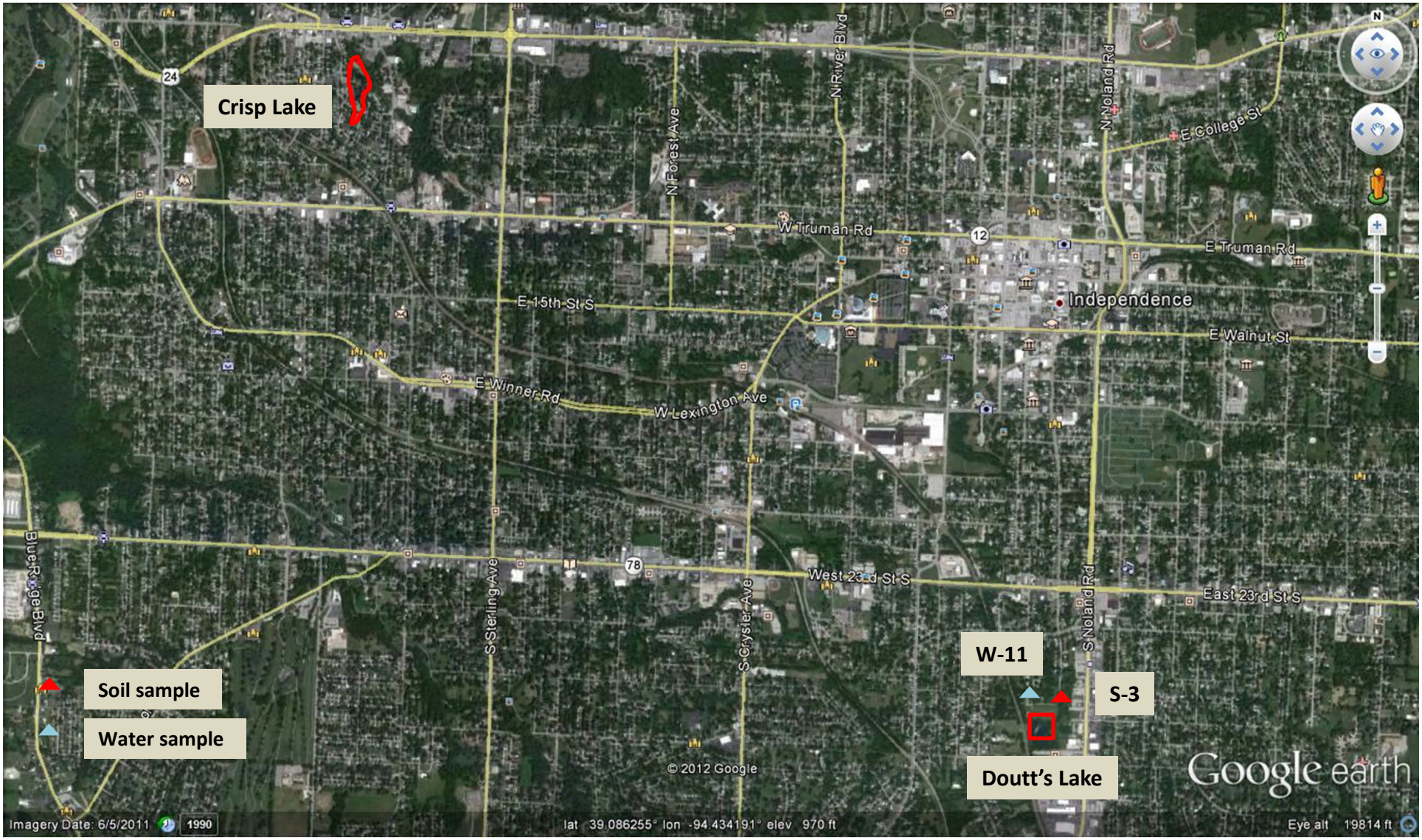
NORTH

confined storm sewer flow path

dry ditch flow path

clean running ditch

Impoundments at Crisp Lake and at end of dry ditch


Crisp Lake
Soil sample
Water sample
W-11
S-3
Doutt's Lake
Independence
W Truman Rd
E Truman Rd
E College St
E 15th St S
E Walnut St
E Winner Rd
W Lexington Ave
West 23rd St S
East 23rd St S
N Forest Ave
N River Blvd
N Noland Rd
S Sterling Ave
S Crysler Ave
S Noland Rd
Blue Ridge Blvd
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lat 39.086255° lon -94.434191° elev 970 ft
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NORTH

Soil samples

Water samples