ecology and environment, inc.
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International Specialists in the Environment

May 18, 1989

Jeffrey Webb
Environmental Protection Agency
1200 Sixth Avenue, HW-113
Seattle, WA 98101

Ref: TDD T10-8905-012

Dear Jeff:

As requested, please find the data tables and associated gridded figure summarizing backhoe, soil sampling work conducted in 1987 on Hollister-Stier property adjacent to the Spokane Junkyard Site, Spokane, WA.

Also attached are three tables summarizing the lead, PCB, and copper air monitoring conducted during the 1988 removal action. Results from fixed monitoring stations positioned along the Hollister-Stier fence line are highlighted by asterisks.

For reference, the OSHA 8-hr TWA for lead dust has been established at 0.05 mg/m^3; PCBs have a OSHA 8-hr TWA of 0.5 mg/m^3; and, copper dust has an 8-hr OSHA TWA of 1 mg/m^3.

Sincerely,

John L. Roland

Attachments

1.9.4.2

USEPA SF
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31096

recycled paper

TABLE

Priority Pollutant Metals Analyses
Soil Samples: Hollister-Stier Property
Spokane Junkyard Site, Spokane, WA
(sampling conducted in September 1987)

		Grid Location				units in mg/kg (ppm)													
		East		North															
Sample Number	Collection Depth (ft.)	From	To	From	To	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
T7080931	1	1150	1200	950	1000	0.200 UJ	11.0	121.0	2.0 U	1.0 U	19.0	33.0	27.0	0.10 U	12.0	1.0 UJ	2.0 U	0.20 UJ	92.0
T7080926	2	1150	1200	950	1000	5.200 J	41.0	339.0	2.0 U	268.0	67.0	692.0	1190.0	0.26	71.0	1.0 UJ	5.3	0.20 UJ	1550.0
T7080927	3 to 4	1150	1200	950	1000	0.560 J	13.0	178.0	2.0 U	1.0 U	19.0	84.0	36.0	0.20 U	15.0	1.0 UJ	2.0 U	0.20 UJ	89.0
T7080918	3 to 4	675	700	950	1000	24.000 J	39.0	449.0	4.4	10.0	109.0	18900.0	1270.0	1.00	111.0	1.6 UJ	2.0 U	0.30 UJ	2190.0
T7080919	4 to 5	675	700	950	1000	0.480	12.0	240.0	2.4	2.3	29.0	188.0	138.0	0.10 U	20.0	1.0 UJ	2.0 U	0.20 UJ	215.0

NOTES:

Refer to attached map figure for grid locations.
Lab = Columbia Analytical Services, Longview WA.

QUALIFIERS:

J = Indicates an estimated value when result is less than specified detection limit or when certain quality assurance criteria were not met.
U = Indicates compound was analyzed for but not detected at the given detection limit.

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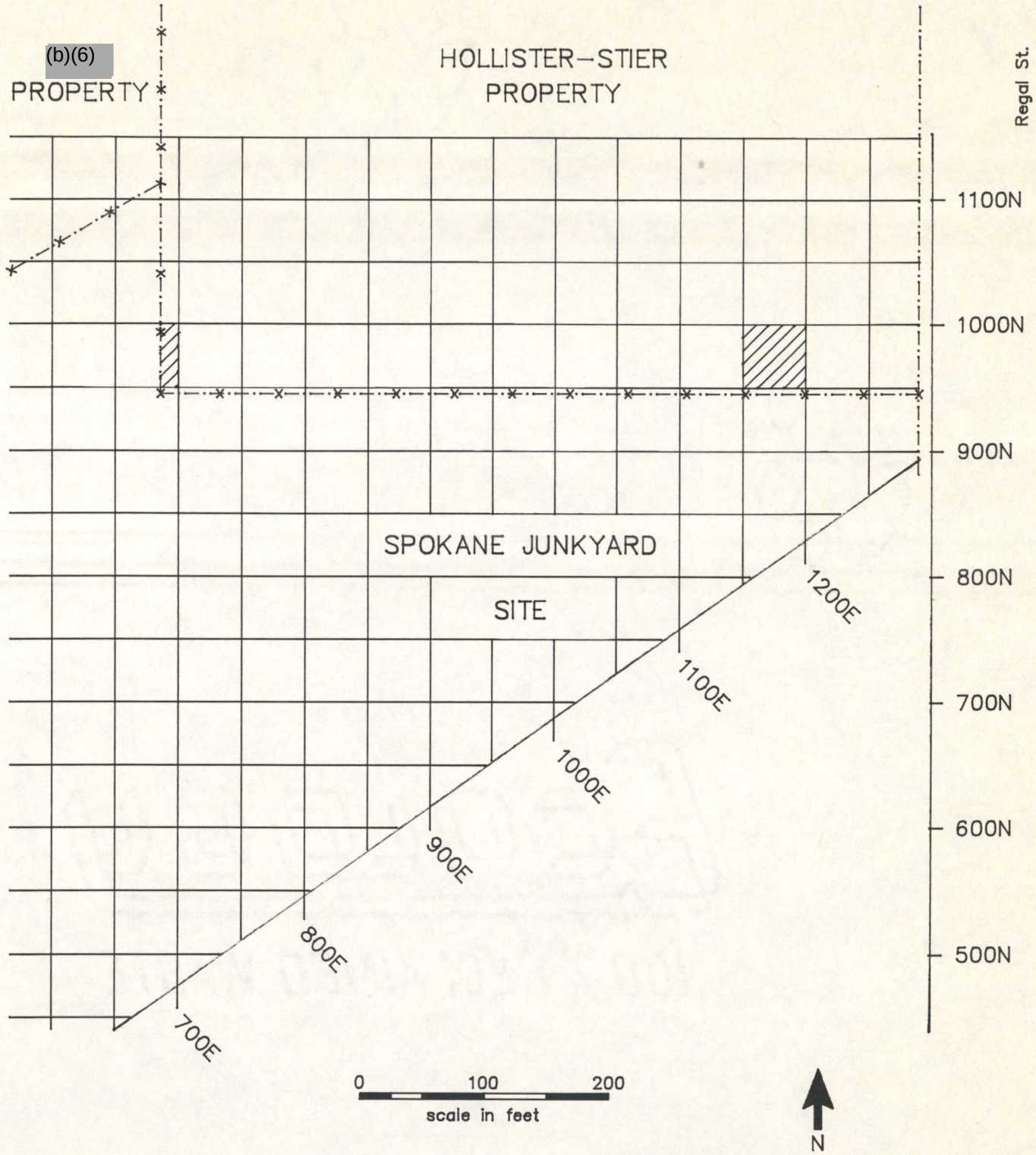

LEGEND

Soil sample area

50' x 50' sampling grid

ecology & environment, inc.	
Job: T10–8711–019	Waste Site: wa0526
Drawn by: D. P.	Date: May 19, 1989

FIGURE
HOLLISTER–STIER SOIL
SAMPLING LOCATIONS
SPOKANE JUNKYARD SITE
Spokane, WA

TABLE

PCB Sample Results
Soil Samples: Hollister-Stier Property
Spokane Junkyard Site
Spokane, WA
mg/kg (ppm)

Sample Number	Sample Date	Grid Location East From	Grid Location East To	Grid Location North From	Grid Location North To	Sample Depth (feet)	Total PCBs (mg/kg)
T7080916	09/03/87	675	700	1000	1050	3	1.0 U
T7080917	09/03/87	675	700	1000	1050	4 to 5	1.0 U
T7080918	09/03/87	675	700	950	1000	3.5	5.0
T7080919	09/03/87	675	700	950	1000	4.5 to 5.5	1.0 U
T7080920	09/03/87	700	750	950	1000	3.5	1.0 U
T7080921	09/03/87	700	750	950	1000	4.5 to 5.5	1.0 U
T7080922	09/03/87	750	800	950	1000	3	1.0 U
T7080923	09/03/87	750	800	950	1000	4 to 5	1.0 U
T7080924	09/03/87	1050	1100	950	1000	3.5	1.0 U
T7080925	09/03/87	1050	1100	950	1000	4.5 to 5.5	1.0 U
T7080929	09/03/87	1100	1150	950	1000	3	1.0 U
T7080930	09/03/87	1100	1150	950	1000	4 to 5	1.0 U
T7080926	09/03/87	1150	1200	950	1000	2.5	1.0 U
T7080927	09/03/87	1150	1200	950	1000	3.5 to 4.5	1.0 U
T7080928	09/03/87	1150	1200	950	1000	3.5 to 4.5	1.0 U
T7080931	09/03/87	1150	1200	950	1000	1	1.0 U
T7080932	09/03/87	1200	1250	950	1000	2	1.0 U
T7080933	09/03/87	1200	1250	950	1000	3.5 to 4.5	1.0 U
T7070486	07/29/87	670	670	1030	1030	Surface	1.0
T7070493	07/29/87	670	670	1000	1000	Surface	1.0
T7070494	07/29/87	670	670	970	970	Surface	12.0

NOTES:

Refer to attached map figure for grid locations.

QUALIFIER:

U - Indicates compound was analyzed for, but was not detected at the given detection limit.

TABLE
Gilian Air Sampling - Airborne Lead
Spokane Junkyard 1988 Removal Action
Spokane, Washington

SAMPLE NUMBER	AREA or WORKER SAMPLING	SAMPLING LOCATION	LEAD DETECTED (ug)	CALCULATED TWA FOR Pb + (mg/cu. meter)	TOTAL TIME (MINUTES)	TOTAL FLOW (LITERS)
T8070001	A	POLE N OF PILE	1.0 U	0.000	720	1890
T8070002	A	COMMAND POST	1.0 U	0.000	300	780
T8070003	A	POLE NW OF PILE	1.0 U	0.000	720	1850
T8070004	A	SCHOOL	1.0 U	0.000	312	810
T8070005	A	BNRR FENCE	1.0 U	0.000	720	1800
T8070006	W	TRACKHOE	1.0 U	0.000	222	550
T8070007	W	YELLOW DUMP	1.0 U	0.000	221	580
T8070008	W	HOSE	1.0 U	0.000	203	530
* T8070009	A	(b)(6) /HS FENCE	1.0 U	0.000	194	520
T8070010	A	(b)(6) FENCE	1.0 U	0.000	186	470
T8070011	W	TRACKHOE	0.0	0.000	0	0
* T8070012	A	(b)(6) /HS FENCE	1.0 U	0.000	385	1040
T8070013	W	YELLOW DUMP	1.8	0.001	522	1380
T8070014	W	HOSE	1.0 U	0.000	221	580
T8070015	A	(b)(6) FENCE	1.0 U	0.000	385	990
T8070016	W	TRACKHOE	1.0 U	0.000	520	1350
T8070017	A	COMMAND POST	10.5	0.007	539	1440
T8070018	W	YELLOW DUMP	1.7	0.001	528	1380
T8070019	W	HOSE	2.0	0.002	422	1110
T8070020	A	POLE N OF PILE	1.0 U	0.000	440	1130
T8070021	A	(b)(6) FENCE	1.0 U	0.000	287	730
* T8070022	A	(b)(6) /HS FENCE	1.0 U	0.000	466	1210
* T8070023	A	/HS FENCE	1.0 U	0.000	444	1170
T8070030		BLANK	1.0 U	0.000	0	0
T8070024	W	TRACKHOE	20.0	0.013	594	1560
T8070025	W	RED DUMP	3.3	0.002	564	1440
T8070026	A	POLE N OF PILE	1.8	0.001	455	1210
T8070027	W	HOSE	2.4	0.002	576	1480
T8070028	W	TRACKHOE	2.0	0.001	532	1360
T8070029	W	RED DUMP	4.5	0.003	550	1440
T8070031	A	POLE N OF PILE	1.3	0.001	502	1830
T8070032	W	HOSE	1.9	0.002	462	1190
* T8070033	A	(b)(6) /HS FENCE	1.6	0.001	497	1820
T8070034	W	FRONTLOADER	0.0	0.000	0	0
T8070035	A	POLE N OF PILE	1.0 U	0.000	544	1920
T8070036	A	FENCE NEAR LOAD	1.8	0.001	541	1960
T8070037	A	BNRR FENCE	1.0 U	0.000	536	1940
T8070038	A	COMMAND POST	1.0 U	0.000	627	2330
T8070039	W	TRACKHOE	10.9	0.007	410	1640
T8070040	W	RED DUMP	43.4	0.027	398	1610
T8070041	W	YELLOW DUMP	10.8	0.007	365	1470
T8070042	W	HOSE	12.6	0.008	386	1540
T8070043	W	TRACKHOE	23.5	0.015	417	1610
T8070046		BLANK	1.0 U	0.000	0	0
T8070044	W	TRACKHOE	0.0	0.000	412	160
T8070045	W	TRACKHOE	0.0	0.000	160	412
T8070047		BLANK	0.0	0.000	0	0

QUALIFIERS:

U - Indicates compound was analyzed for, but was not detected at the given detection limit.

* - Indicates that sample station was located along Hollister-Stier fence line.

+ - Note that the time period used to derive the calculated time-weighted-average (TWA) is from the time durations of actual samplings.

TABLE
Gilian Air Sampling - Airborne PCBs
Spokane Junkyard 1988 Removal Action
Spokane, Washington

SAMPLE NUMBER	AREA or WORKER SAMPLING	SAMPLING LOCATION	PCBs DETECTED (ug)	CALCULATED TWA FOR PCBs + (mg/cu. meter)
T8070011	W	TRACKHOE	0.000	0.000
T8070034	W	FRONTLOADER	0.000	0.000
T8070044	W	TRACKHOE	0.008 U	0.000
T8070045	W	TRACKHOE	0.008 U	0.000
T8070047		BLANK	0.008 U	0.000

QUALIFIERS:

U - Indicates compound was analyzed for, but was not detected at the given detection limit.

+ - Note that the time periods used to derive the calculated time-weighted-average (TWA) are from the durations of actual samplings, ranging from 194 to 720 minutes.

TABLE
Gilian Air Sampling - Airborne Copper
Spokane Junkyard 1988 Removal Action
Spokane, Washington

SAMPLE NUMBER	AREA or WORKER SAMPLING	SAMPLING LOCATION	COPPER DETECTED (ug)	CALCULATED TWA FOR Cu + (mg/cu. meter)	TOTAL TIME (MINUTES)	TOTAL FLOW (LITERS)
T8070001	A	POLE N OF PILE	0.3 U	0.000	720	1890
T8070002	A	COMMAND POST	0.3 U	0.000	300	780
T8070003	A	POLE NW OF PILE	0.3 U	0.000	720	1850
T8070004	A	SCHOOL	0.3 U	0.000	312	810
T8070005	A	BNRR FENCE	0.3 U	0.000	720	1800
T8070006	W	TRACKHOE	0.3 U	0.000	222	550
T8070007	W	YELLOW DUMP	0.6	0.001	221	580
T8070008	W	HOSE	0.3 U	0.000	203	530
* T8070009	A	(b)(6) HS FENCE	0.3 U	0.000	194	520
T8070010	A	(b)(6) FENCE	0.3 U	0.000	186	470
T8070011	W	TRACKHOE	0.0	0.000	0	0
* T8070012	A	(b)(6) HS FENCE	0.3 U	0.000	385	1040
T8070013	W	YELLOW DUMP	2.4	0.002	522	1380
T8070014	W	HOSE	0.3 U	0.000	221	580
T8070015	A	(b)(6) FENCE	0.3 U	0.000	385	990
T8070016	W	TRACKHOE	3.3	0.002	520	1350
T8070017	A	COMMAND POST	0.3 U	0.000	539	1440
T8070018	W	YELLOW DUMP	0.3 U	0.000	528	1380
T8070019	W	HOSE	1.8	0.002	422	1110
T8070020	A	POLE N OF PILE	1.9	0.002	440	1130
T8070021	A	(b)(6) FENCE	0.3 U	0.000	287	730
* T8070022	A	(b)(6) HS FENCE	1.0	0.001	466	1210
* T8070023	A	HS FENCE	0.5 U	0.000	444	1170
T8070030		BLANK	0.5 U	0.000	0	0
T8070024	W	TRACKHOE	51.0	0.033	594	1560
T8070025	W	RED DUMP	5.2	0.004	564	1440
T8070026	A	POLE N OF PILE	2.0	0.002	455	1210
T8070027	W	HOSE	2.9	0.002	576	1480
T8070028	W	TRACKHOE	1.2	0.001	532	1360
T8070029	W	RED DUMP	3.6	0.003	550	1440
T8070031	A	POLE N OF PILE	0.5 U	0.000	502	1830
T8070032	W	HOSE	1.6	0.001	462	1190
* T8070033	A	(b)(6) HS FENCE	0.8	0.000	497	1820
T8070034	W	FRONTLOADER	0.0	0.000	0	0
T8070035	A	POLE N OF PILE	1.0	0.001	544	1920
T8070036	A	FENCE NEAR LOAD	0.8	0.000	541	1960
T8070037	A	BNRR FENCE	0.5 U	0.000	536	1940
T8070038	A	COMMAND POST	0.5 U	0.000	627	2330
T8070039	W	TRACKHOE	5.1	0.003	410	1640
T8070040	W	RED DUMP	10.1	0.006	398	1610
T8070041	W	YELLOW DUMP	6.2	0.004	365	1470
T8070042	W	HOSE	4.5	0.003	386	1540
T8070043	W	TRACKHOE	10.6	0.007	417	1610
T8070046		BLANK	0.5 U	0.000	0	0
T8070044	W	TRACKHOE	0.0	0.000	412	160
T8070045	W	TRACKHOE	0.0	0.000	160	412
T8070047		BLANK	0.0	0.000	0	0

QUALIFIERS:

U - Indicates the compound was analyzed for, but was not detected at the given detection limit.

* - Indicates that the sample station was located along Hollister-Stier fence line.

+ - Note that the time periods used to derive the calculated time-weighted-average (TWA) are from the durations of actual samplings.