ILUKA

28 October 2010

Piedmont Regional Office
OCT 29 2010
RECEIVED

Ms. Janine Howard
Water Permit Writer
Department of Environmental Quality – Piedmont Regional Office
4949-A Cox Road
Glen Allen, VA 23060

RE: Renewal Package for VPDES Permit #VA0091456, Iluka Resources – Concord Response to Request for Additional Information

Ms. Howard:

Per your email dated 15 October 2010, Iluka is providing the following additional information requested including:

- Revision to EPA Form 2C Part I. A. (change of outfall coordinates) **Attached**
- Revision to Attachment A (Heptachlor quantification limit) **Attached**
- Testing Frequency Waiver – EPA Form 2C (waiver request)

Testing Frequency Waiver – EPA Form 2C:
The water quality samples collected on 7 September 2006 and reported on 13 October 2006 by Primary Laboratories **(attached)** were required to be performed by our current permit within one (1) year of the permit issuance. The sampling parameters were based on the requirements of Attachment A in use at that time and included with the permit. These samples were collected during an actual discharge and are still representative of our existing water quality now as there have been no changes to the Concord Concentrator process. As Iluka believes the sample results from September 2006 are representative of current water quality and use of this data will provide the agency a more accurate assessment of the site's water quality throughout the permitted period, we respectfully request the agency grant the waiver and recognize this data.

While the Concord Concentrator did discharge on several occasions following receipt of the reissuance reminder letter in November 2009, Iluka was unable to collect composite samples for various reasons. The first discharge occurred in December 2009, less than a month after receipt of the letter and Iluka believed it would have other opportunities to collect additional samples during the traditional rainy season associated with late winter and early spring. During January 2010, Concord had two (2) discharges totaling three (3) days. Both began overnight or on a weekend and given that Iluka does not own a composite sampler, timing of the discharges precluded Iluka from renting one on short notice. From previous experience, Iluka has had to schedule a rental at least 72 hours in advance of a discharge and units are not always available when requested.

Iluka Resources Inc. – VA Operations
12472 St. John Church Rd., Stony Creek, VA 23882
Phone: 434.348.4300 Fax: 434.246.3039

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In February 2010, Concord had several discharges lasting several days during the normal work week but Iluka's primary vendor for composite sampler rentals went out of business at the same time. By the time Iluka arranged for a secondary vendor to supply and deliver a sampler, the discharge ceased. Due to the issues surrounding availability, procurement and delivery of rental equipment, Iluka is currently in the process of purchasing a composite sampler which will alleviate any further issues with equipment availability.

We hope this additional information satisfies the request. Should you have any questions or require further information, I may be reached via mobile at 804.721.9613 or via email at jack.rayburn@iluka.com.

Sincerely,

W.T. "Jack" Rayburn
Environment, Health & Safety Supervisor
Iluka Resources Inc. – US Region

Attachments: Revised EPA Form 2C
Revision to Attachment A (Heptachlor quantification limit)
Analytical Laboratory Report, Primary Laboratories, Inc., 13 Oct 06

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0091456

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	36	53	40	77	34	40	Unnamed tributary of Hardwood Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUT-FALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
1	Process Water	2200 GPM (3,168,000 MGD)	Gravity Concentration in Settling Ponds	1-G	1-U
				4-C	

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(*s*) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
1	Process Water	1 (52 Days/yr)	12	1.79 MGD	3.696 MGD	1.79 MGD	3.696 MGD	52

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES (*complete Item III-B*) ☑ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

 CONTINUE ON PAGE 3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
VA0091456

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
N/A	N/A	N/A	N/A

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Primary Laboratories, Inc	7423 Lee Davis Road Mechanicsville, VA 23111	804.559.9004	Both Attachment A Sample Rounds, some Quarterly TSS.
Air, Water, & Soil Laboratories, Inc	2109A North Hamilton Street Richmond, VA 23230	804.358.8295	COD, BOD, TOC, some Quarterly TSS
Schneider Laboratories, Inc	2512 West Cary Street Richmond, VA 23220	804.353.6778	Some Quarterly TSS
Coastal Bioanalysts	6400 Enterprise Court Gloucester, VA 23061	804.694.8285	Whole Effluent Toxicity.(Collected during the 1st year of the permit.

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
William T. Rayburn, EHS Supervisor	(434) 348-4300
C. SIGNATURE	**D. DATE SIGNED**
William T. Rayburn	10/12/2010

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): VA0091456

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.: 001

PART A – You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	<2						1	mg/L				
b. Chemical Oxygen Demand (*COD*)	<10						1	mg/L				
c. Total Organic Carbon (*TOC*)	1.2						1	mg/L				
d. Total Suspended Solids (*TSS*)	39.0				14.46		12	mg/L				
e. Ammonia (*as N*)	0.06				0.04		2	mg/L				
f. Flow	VALUE 10.080		VALUE		VALUE 2.366		12	MGD		VALUE		
g. Temperature (*winter*)	VALUE 20.7		VALUE		VALUE 10.0		17	°C		VALUE		
h. Temperature (*summer*)	VALUE 27.7		VALUE		VALUE 27.7		2	°C		VALUE		
i. pH	MINIMUM 4.86	MAXIMUM 8.89	MINIMUM	MAXIMUM			22	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	(2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	(2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	(2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	(2) MASS	b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual	X		0.07						2	mg/L				
c. Color		X												
d. Fecal Coliform	X		2						1	mpn				
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)		X												

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)		X												
h. Oil and Grease		X												
i. Phosphorus (as P), Total (7723-14-0)		X												
j. Radioactivity														
(1) Alpha, Total	X		1.3				0.65		2	pCi/l				
(2) Beta, Total	X		46.3				24.4		2	pCi/l				
(3) Radium, Total		X												
(4) Radium 226, Total	X		0.20						1	pCi/l				
k. Sulfate (*as SO_4*) (14808-79-8)		X												
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)		X												
q. Boron, Total (7440-42-8)		X												
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)		X												
t. Magnesium, Total (7439-95-4)		X												
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)		X												
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUE ON PAGE V-3

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0091456	001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			<0.0014						2	mg/L				
2M. Arsenic, Total (7440-38-2)	X			<0.001						2	mg/L				
3M. Beryllium, Total (7440-41-7)	X			0.0003						1	mg/L				
4M. Cadmium, Total (7440-43-9)	X			<0.003						2	mg/L				
5M. Chromium, Total (7440-47-3)	X			<0.0016						2	mg/L				
6M. Copper, Total (7440-50-8)	X			<0.0005						2	mg/L				
7M. Lead, Total (7439-92-1)	X			<0.0005						2	mg/L				
8M. Mercury, Total (7439-97-6)	X			<0.0002						2	mg/L				
9M. Nickel, Total (7440-02-0)	X			<0.00094						2	mg/L				
10M. Selenium, Total (7782-49-2)	X			<0.002						2	mg/L				
11M. Silver, Total (7440-22-4)	X			<0.0002						2	mg/L				
12M. Thallium, Total (7440-28-0)	X			0.002						2	mg/L				
13M. Zinc, Total (7440-66-6)	X			<0.0036						2	mg/L				
14M. Cyanide, Total (57-12-5)	X			<0.010						2	mg/L				
15M. Phenols, Total	X			<10						2	ug/L				
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X			<5						2	ug/L				
2V. Acrylonitrile (107-13-1)	X			<5						2	ug/L				
3V. Benzene (71-43-2)	X			<5						2	ug/L				
4V. Bis (*Chloro-methyl*) Ether (542-88-1)	X			<10						2	ug/L				
5V. Bromoform (75-25-2)	X			<5						2	ug/L				
6V. Carbon Tetrachloride (56-23-5)	X			<5						2	ug/L				
7V. Chlorobenzene (108-90-7)	X			<5						2	ug/L				
8V. Chlorodi-bromomethane (124-48-1)	X			<5						2	ug/L				
9V. Chloroethane (75-00-3)	X			<10						1	ug/L				
10V. 2-Chloro-ethylvinyl Ether (110-75-8)	X			<10						1	ug/L				
11V. Chloroform (67-66-3)	X			<5						2	ug/L				
12V. Dichloro-bromomethane (75-27-4)	X			<5						2	ug/L				
13V. Dichloro-difluoromethane (75-71-8)	X			<1						1	ug/L				
14V. 1,1-Dichloro-ethane (75-34-3)	X			<5						1	ug/L				
15V. 1,2-Dichloro-ethane (107-06-2)	X			<5						1	ug/L				
16V. 1,1-Dichloro-ethylene (75-35-4)	X			<5						1	ug/L				
17V. 1,2-Dichloro-propane (78-87-5)	X			<5						2	ug/L				
18V. 1,3-Dichloro-propylene (542-75-6)	X			<10						1	ug/L				
19V. Ethylbenzene (100-41-4)	X			<5						2	ug/L				
20V. Methyl Bromide (74-83-9)	X			<5						2	ug/L				
21V. Methyl Chloride (74-87-3)	X			<5						1	ug/L				

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X			<5						1	ug/L				
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X			<5						2	ug/L				
24V. Tetrachloro-ethylene (127-18-4)	X			<5						1	ug/L				
25V. Toluene (108-88-3)	X			<5						2	ug/L				
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X			<5						1	ug/L				
27V. 1,1,1-Trichloro-ethane (71-55-6)	X			<10						1	ug/L				
28V. 1,1,2-Trichloro-ethane (79-00-5)	X			<5						2	ug/L				
29V Trichloro-ethylene (79-01-6)	X			<5						1	ug/L				
30V. Trichloro-fluoromethane (75-69-4)	X			<10						1	ug/L				
31V. Vinyl Chloride (75-01-4)	X			<5						1	ug/L				
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X			<10						2	ug/L				
2A. 2,4-Dichloro-phenol (120-83-2)	X			<10						2	ug/L				
3A. 2,4-Dimethyl-phenol (105-67-9)	X			<10						2	ug/L				
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X			<50						1	ug/L				
5A. 2,4-Dinitro-phenol (51-28-5)	X			<10						2	ug/L				
6A. 2-Nitrophenol (88-75-5)	X			<1						1	ug/L				
7A. 4-Nitrophenol (100-02-7)	X			<50						1	ug/L				
8A. P-Chloro-M-Cresol (59-50-7)	X			<10						1	ug/L				
9A. Pentachloro-phenol (87-86-5)	X			<10						2	ug/L				
10A. Phenol (108-95-2)	X			<10						2	ug/L				
11A. 2,4,6-Trichloro-phenol (88-05-2)	X			<10						2	ug/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X			<10						2	ug/L				
2B. Acenaphtylene (208-96-8)	X			<10						1	ug/L				
3B. Anthracene (120-12-7)	X			<10						2	ug/L				
4B. Benzidine (92-87-5)	X			<10						2	ug/L				
5B. Benzo (*a*) Anthracene (56-55-3)	X			<10						2	ug/L				
6B. Benzo (*a*) Pyrene (50-32-8)	X			<10						2	ug/L				
7B. 3,4-Benzo-fluoranthene (205-99-2)	X			<10						1	ug/L				
8B. Benzo (*ghi*) Perylene (191-24-2)	X			<10						1	ug/L				
9B. Benzo (*k*) Fluoranthene (207-08-9)	X			<10						2	ug/L				
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X			<10						1	ug/L				
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X			<10						2	ug/L				
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X			<10						2	ug/L				
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X			<10						1	ug/L				
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X			<10						1	ug/L				
15B. Butyl Benzyl Phthalate (85-68-7)	X			<10						2	ug/L				
16B. 2-Chloro-naphthalene (91-58-7)	X			<10						2	ug/L				
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X			<10						1	ug/L				
18B. Chrysene (218-01-9)	X			<10						2	ug/L				
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X			<10						2	ug/L				
20B. 1,2-Dichloro-benzene (95-50-1)	X			<10						1	ug/L				
21B. 1,3-Di-chloro-benzene (541-73-1)	X			<10						1	ug/L				

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichloro-benzene (106-46-7)	X			<10						1	ug/L				
23B. 3,3-Dichloro-benzidine (91-94-1)	X			<10						2	ug/L				
24B. Diethyl Phthalate (84-66-2)	X			<10						2	ug/L				
25B. Dimethyl Phthalate (131 -11-3)	X			<10						2	ug/L				
26B. Di-N-Butyl Phthalate (84-74-2)	X			<10						2	ug/L				
27B. 2,4-Dinitro-toluene (121-14-2)	X			<10						2	ug/L				
28B. 2,6-Dinitro-toluene (606-20-2)	X			<10						1	ug/L				
29B. Di-N-Octyl Phthalate (117-84-0)	X			<10						1	ug/L				
30B. 1,2-Diphenyl-hydrazine (*as Azo-benzene*) (122-66-7)	X			<10						2	ug/L				
31B. Fluoranthene (206-44-0)	X			<10						2	ug/L				
32B. Fluorene (86-73-7)	X			<10						2	ug/L				
33B. Hexachloro-benzene (118-74-1)	X			<10						2	ug/L				
34B. Hexachloro-butadiene (87-68-3)	X			<10						2	ug/L				
35B. Hexachloro-cyclopentadiene (77-47-4)	X			<10						2	ug/L				
36B Hexachloro-ethane (67-72-1)	X			<10						2	ug/L				
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X			<10						2	ug/L				
38B. Isophorone (78-59-1)	X			<10						2	ug/L				
39B. Naphthalene (91-20-3)	X			<10						1	ug/L				
40B. Nitrobenzene (98-95-3)	X			<10						2	ug/L				
41B. N-Nitro-sodimethylamine (62-75-9)	X			<10						2	ug/L				
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X			<10						2	ug/L				

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitro-sodiphenylamine (86-30-6)	X			<10						2	ug/L				
44B. Phenanthrene (85-01-8)	X			<10						1	ug/L				
45B. Pyrene (129-00-0)	X			<10						2	ug/L				
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X			<10						2	ug/L				
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X			<0.05						2	ug/L				
2P. α-BHC (319-84-6)	X			<0.05						2	ug/L				
3P. β-BHC (319-85-7)	X			<0.05						2	ug/L				
4P. γ-BHC (58-89-9)	X			<0.05						1	ug/L				
5P. δ-BHC (319-86-8)	X			<0.05						1	ug/L				
6P. Chlordane (57-74-9)	X			<0.20						2	ug/L				
7P. 4,4'-DDT (50-29-3)	X			<0.10						2	ug/L				
8P. 4,4'-DDE (72-55-9)	X			<0.10						2	ug/L				
9P. 4,4'-DDD (72-54-8)	X			<0.10						2	ug/L				
10P. Dieldrin (60-57-1)	X			<0.10						2	ug/L				
11P. α-Enosulfan (115-29-7)	X			<0.1						1	ug/L				
12P. β-Endosulfan (115-29-7)	X			<0.04						1	ug/L				
13P. Endosulfan Sulfate (1031-07-8)	X			<0.10						2	ug/L				
14P. Endrin (72-20-8)	X			<0.10						2	ug/L				
15P. Endrin Aldehyde (7421-93-4)	X			<0.10						2	ug/L				
16P. Heptachlor (76-44-8)	X			<0.10						2	ug/L				

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
VA0091456	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X			<0.10						2	ug/L				
18P. PCB-1242 (53469-21-9)	X			<1.0						2	ug/L				
19P. PCB-1254 (11097-69-1)	X			<1.0						2	ug/L				
20P. PCB-1221 (11104-28-2)	X			<1.0						2	ug/L				
21P. PCB-1232 (11141-16-5)	X			<1.0						2	ug/L				
22P. PCB-1248 (12672-29-6)	X			<1.0						2	ug/L				
23P. PCB-1260 (11096-82-5)	X			<1.0						2	ug/L				
24P. PCB-1016 (12674-11-2)	X			<1.0						2	ug/L				
25P. Toxaphene (8001-35-2)	X			<5.0						2	ug/L				

Primary Laboratories, Inc.

7423 Lee Davis Road • Mechanicsville, VA 23111 • Telephone (804) 559-9004 • Fax (804) 559-9306

ANALYTICAL LABORATORY REPORT

27-Oct-10

ILUKA Resource, Inc.
Attn: Kevin Rideout
12472 St. John Church Road
Stony Creek, Virginia 23882

Project: Concord Process Water
Date Received: 18-Oct-10
Date Sampled: 15-Oct-10
Work Order No: 1010157-01
Client ID: **Concord Process Water**

Test Description	Final Result	Reporting Limit	Units of Measure	Method Numbers*	Date Analyzed	Tech. Initials
Pesticides						
Heptachlor	<0.05	0.05	ug/L	608	27-Oct-10	HV

* All methods are Standard Methods 18th Edition unless otherwise noted.

Note: Samples received in laboratory on ice.

Signature: Pamy L. Bragg
Pamy L. Bragg
Laboratory Manager

Date: 10/27/10

These analytical results are based upon materials provided by the client and are intended for the exclusive use of the client. These analytical results represent the best judgement of Primary Laboratories, Inc. Primary Laboratories, Inc. assumes no responsibility, express or implied, as to the interpretation of the analytical results contained in this report. This report is not to be reproduced except with the written approval of Primary Laboratories, Inc.

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ANALYTICAL LABORATORY REPORT

13-Oct-06

Iluka Resources, Inc
Attn: Kevin Rideout
12472 St Johns Church Road
Stoney Creek, VA 23882

Date Received: 07-Sep-06
Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: #1 - #13

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Dissolved Metals							
Antimony	<0.100	0.100	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Arsenic	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Cadmium	<0.010	0.010	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Copper	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Lead	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Mercury	<0.0002	0.0002	mg/L	245.1	13-Sep-06	14:47	AB
Nickel	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Selenium	<0.050	0.050	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Silver	<0.020	0.020	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Thallium	0.002	0.002	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Zinc	<0.010	0.010	mg/L	200.2/200.7	11-Sep-06	16:14	AB
Chromium III	<0.020	0.020	mg/L	200.2/200.7	27-Sep-06	16:40	HV
Chromium VI	<0.005	0.005	mg/L	218.4	08-Sep-06	08:00	NA
Cyanide	<0.010	0.010	mg/L	335.2	12-Sep-06	14:00	MS
Hydrogen Sulfide	<0.05	0.05	mg/L	376.1	27-Sep-06	16:45	PB
E. Coli	<2	2	MPN/100ml	9221C	08-Sep-06	16:00	MS
Ammonia	0.06	0.01	mg/L	350.3	12-Sep-06	08:00	NA
Chlorides	9.1	0.1	mg/L	325.3	11-Sep-06	11:00	NA
Chlorine, Total Residual	<0.010	0.010	mg/L	330.5	14-Sep-06	16:50	HV
Tributyltin	30	30	ng/L	GC/FID	14-Sep-06	16:58	SC*

Primary Laboratories, Inc.
Results

13-Oct-06

Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: #1 - #13

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Pesticides							
Aldrin	<0.05	0.05	ug/L	608	12-Sep-06	19:33	HV
Chlordane	<0.20	0.20	ug/L	608	12-Sep-06	19:33	HV
Dieldrin	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDT	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDE	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
4,4-DDD	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan sulfate	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan I	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endosulfan II	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endrin	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Gamma-BHC (Lindane	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Beta-BHC	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Alpha-BHC	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Heptachlor	<0.50	0.50	ug/L	608	12-Sep-06	19:33	HV
Kepone	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Methoxychlor	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Mirex	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Endrin Aldehyde	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
Heptachlor Epoxide	<0.10	0.10	ug/L	608	12-Sep-06	19:33	HV
PCB 1016	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1221	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1232	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1242	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1248	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1254	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
PCB 1260	<1.0	1.0	ug/L	608	12-Sep-06	19:33	HV
Toxaphene	<5.0	5.0	ug/L	608	12-Sep-06	19:33	HV

Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: #1 - #13

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Organophosphorus Pesticides							
Demeton	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Malathion	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Chlorpyrifos	<0.2	0.2	ug/L	622	14-Sep-06	21:05	SC*
Parathion	<1	1	ug/L	622	14-Sep-06	21:05	SC*
Guthion	<1	1	ug/L	622	14-Sep-06	21:05	SC*

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method:	624
Date Analyzed:	08-Sep-06
Time Analyzed:	13:17
Technician:	PB
Date Sampled:	07-Sep-06
Units of Measure:	ug/L
Work Order No:	0609057-01
Client ID:	#1 - #13

Test Description	Final Result	Detection Limit
Acrolein	<5	5
Acrylonitrile	<5	5
Benzene	<5	5
Bromoform	<5	5
Carbon tetrachloride	<5	5
Chlorobenzene	<5	5
Chlorodibromomethane	<5	5
Chloroform	<5	5
Dichloromethane	<5	5
Dichlorobromomethane	<5	5
1,1-Dichloroethylene	<5	5
1,2-Dichloroethane	<5	5
1,2-trans-Dichloroethylene	<5	5
1,2-Dichloropropane	<5	5
1,3-Dichloropropene	<5	5
Ethylbenzene	<5	5
Methylene Bromide	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Tetrachloroethylene	<5	5
Toluene	<5	5
Trichloroethylene	<5	5
1,1,2-Trichloroethane	<5	5
Vinyl Chloride	<5	5

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method:	625
Date Analyzed:	12-Sep-06
Time Analyzed:	15:04
Technician:	HV
Date Sampled:	07-Sep-06
Units of Measure:	ug/L
Work Order No:	0609057-01
Client ID:	#1 - #13

Test Description	Final Result	Detection Limit
Acenaphthene	<10	10
Anthracene	<10	10
Benzidine	<10	10
Benzo(a) anthracene	<10	10
Benzo(b) fluoranthene	<10	10
Benzo(k) fluoranthene	<10	10
Benzo(a)pyrene	<10	10
bis-(2-Chloroethyl)ether	<10	10
bis-(2-Chloroisopropyl)ether	<10	10
Butyl benzyl phthalate	<10	10
2-Chloronaphthalene	<10	10
2-Chlorophenol	<10	10
Chrysene	<10	10
Dibenzo(a,h)anthracene	<10	20
Di-n-butyl phthalate	<10	10
1,2-Dichlorobenzene	<10	10
1,3-Dichlorobenzene	<10	10
1,4-Dichlorobenzene	<10	10
3,3-Dichlorobenzidine	<10	20
2,4-Dichlorophenol	<10	10
Diethyl phthalate	<10	10
2,4-Dimethylphenol	<10	10
Di-2-Ethylhexyl Phthalate	<10	10
Dimethyl phthalate	<10	10
2,4-Dinitrophenol	<10	10
2,4-Dinitrotoluene	<10	10
1,2-Diphenylhydrazine	<10	10

Primary Laboratories, Inc.
Results

13-Oct-06

Test Method: 625 (Con't)
Date Analyzed: 12-Sep-06
Time Analyzed: 15:04
Technician: HV
Date Sampled: 07-Sep-06
Units of Measure: ug/L
Work Order No: 0609057-01
Client ID: **#1 - #13**

Test Description	Final Result	Detection Limit
Fluoranthene	<10	10
Fluorene	<10	10
Hexachlorobenzene	<10	10
Hexachlorobutadiene	<10	10
Hexachlorocyclopentadiene	<10	10
Hexachloroethane	<10	10
Indeno(1,2,3-cd) pyrene	<20	20
Isophorone	<10	10
2-Methyl-4,6-Dinitrophenol	<50	50
Nitrobenzene	<10	10
N-Nitrosodimethylamine	<10	10
N-Nitrosodiphenylamine	<10	10
N-Nitrosodi-n-propylamine	<10	10
Pentachlorophenol	<10	10
Phenol	<10	10
Pyrene	<10	10
1,2,4-Trichlorobenzene	<10	10
2,4,6-Trichlorophenol	<10	10

Date Sampled: 07-Sep-06
Work Order No: 0609057-01
Client ID: **#1 - #13**

Test Description	Final Result	Reporting Limit	Units of Measure	EPA Test Method	Date Analyzed	Time Analyzed	Tech. Initials
Gross Alpha	0.0±0.4	0.8	pci/l	900.0	25-Sep-06	08:00	SC*
Gross Beta	2.5±1.0	2.1	pci/l	900.0	25-Sep-06	08:00	SC*
Strontium-90	0.4±0.4	1.4	pci/l	905.0	03-Oct-06	11:00	SC*
Tritium	20.3±88.5	147.2	pci/l	906.0	06-Oct-06	-	SC*

Signature: Parry Bragg Date: 10/13/06
Parry L. Bragg
Laboratory Manager

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