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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF WASTE MANAGEMENT
Highland Building
121 South Highland Avenue
Pittsburgh, Pennsylvania 15206-3988
(412) 645-7100 (answers 24 hrs.)

August 10, 1988

CERTIFIED MAIL #P 536 374 160

Westinghouse Electric Corporation
Westinghouse Building
Gateway Center
pittsburgh, PA 15222

Attention: Linda L. LeGoullon, P.E.
Project Engineer

RE: Westinghouse Electric Corporation
Beaver Plant
Vanport, Beaver County
Groundwater Assessment - VOC
Contamination

Dear Ms. LeGoullon:

The Department has reviewed the Groundwater Assessment Plan as received in correspondence from you dated August 1, 1988.

The Plan was prepared in response to the discovery of Volatile Organic compounds in several of the groundwater monitoring wells in Area A-9 of the Westinghouse - Beaver Plant. The proposal, as outlined in your August 1st letter, refers in large part to a March, 1987 report entitled "Revised Remedial Action Plan" which was originally developed to address existing cyanide/acid contamination in Area A-9 at the Beaver Plant.

The Department generally agrees with the intent of the August 1, 1988 Groundwater Assessment Plan and approves the plan for implementation with the following conditions:

1. An additional shallow zone monitoring well should be placed near the southeast corner of the waste storage tanks just east of well B-1. Based on the Department's recent analytical results from the wells, it is suspected that groundwater may be contaminated by VOCs in this area.

MPL 005 3856

132/ 6117042

A report by Paul C. Rizzo Associates dated September 17, 1985 indicates that two monitoring wells, B-2 and B-3, are already located in this area. These wells might be useful if they are still in place and constructed properly.

2. Deep zone monitoring well B-5 does not appear to be constructed properly and may be allowing communication between the upper and lower groundwater zones. Based on the boring log and well construction diagram shown in the May 1986 Groundwater Assessment Report, it appears that there is no bentonite seal above the well. It is also uncertain whether the annular space was appropriately sealed. This may account for the presence of VOCs in the lower groundwater zone at monitoring well B-5.

   Another deep zone monitoring well should be properly constructed in the vicinity of B-5. Well construction details should be submitted to the Department for review.

3. Typical well construction diagrams should be submitted to the Department for the proposed shallow and deep monitoring wells.

4. Boring logs and accurate construction detail diagrams for all existing monitoring wells in Area A-9 should be submitted to the Department.

5. Due to its low chemical resistance to chlorinated solvents, PVC casing and screens should not be used for well construction as proposed in the Assessment Plan. PVC materials could potentially adsorb solvents or leach organic compounds from its polymer matrix. This may significantly bias the monitoring results. In this assessment, monitoring wells should be constructed with stainless steel or teflon casings and screens.

   The nature of this groundwater assessment and any subsequent abatement/cleanup will require the analysis of VOC concentrations to very low levels. It is generally believed that the adsorption of chlorinated solvents onto PVC may be greater in lower concentrations than in high concentrations. Representative analytical results are critical in achieving an accurate description of the contaminant plume and in making decisions regarding the extent and level of cleanup.

6. Due to the reasons stated in the preceeding comment, monitoring equipment constructed of PVC should not be used for sampling. It has been shown that at low concentrations of VOCs, under field conditions, the type of sampling device can significantly affect the analytical results. Sampling equipment should be constructed from stainless steel or teflon.

WPL 005 3857
132/ 6117043

7. Sampling and analysis of all monitoring wells should be performed monthly for three months following the construction of the proposed monitoring wells. The initial sampling event should occur within 10 days of the construction of the proposed monitoring wells.

   After the third month of sampling and analyses, the Department will review all associated analytical and field data and make a determination regarding the need for and frequency of additional sampling.

   If the initial analytical results for any of the new wells is positive for any VOC, the suspect well should be resampled within 72 hours of receipt of the positive analytical result. The Department should be notified before the well is resampled.

   All analytical results and sampling field data should be submitted to the Department within ten (10) days of receipt of the results from the laboratory.

8. The Department reserves the right to obtain and/or "split" groundwater samples as deemed necessary.

   The Department will refer to this initial plan, as detailed in the August 1, 1988 letter and the conditions set forth herein, as the Phase 1 Groundwater Assessment.

   Westinghouse should be prepared to submit to the Department a summary report of the Phase 1 results and conclusions along with recommendations and plans on implementing the next stage of investigation. The Department will refer to the next stage as the Phase 2 Groundwater Assessment.

   The Phase 1 Groundwater Assessment Summary Report and the Phase 2 Groundwater Assessment Plan should be received by the Department within thirty (30) days of the first groundwater sampling event.

   Westinghouse should be prepared to implement the Phase 2 Groundwater Assessment Plan within thirty (30) days of the Department's final approval.

Please supply the information required in the preceeding comments to the Department within fourteen (14) days of receipt of this letter.

Enclosed you will find copies of the Department's analytical results of samples obtained from the groundwater monitoring wells in Area A-9 of the Beaver Plant on July 14, 1988.

WPL 005 3858

132/ 6117044

If you have any questions concerning this letter, please contact this office.

Sincerely,

Anthony D. Orlando
Regional Manager
Bureau of Waste Management
Southwestern Region

ADO/ETM/kld

Enclosure

WPL 005 3859

132/ 6117045

ER BL 131
9/82

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number CNA-5913
Date Received 7/15/88

ESTABLISHMENT: WELL B-1 | CASE: WESTINGHOUSE | FACILITY: BEAVER PLANT | COLL NUMBER: 2517
COUNTY: BEAVER | MUNICIPALITY: VANPORT | PROGRAM: BWM | COLL NAME/PHONE NUMBER: ERIC MANGES 8-645-7095 | TYPE TR | STD ANALYSIS

CARD (1)	ID CODE ALL CARDS	LATITUDE	LONGITUDE	DATE	TIME	KIND
1		0	0	07 48 8	11 15	

USGS QUAD | BUREAU ANAL | SAMPLE NUMBER | STREAM NAME | RELATIVE POINT
BWM 2511752 0

FULL DESCRIPTION WHERE SAMPLE TAKEN: MONITORING WELL B-1

ADDITIONAL LAB ANALYSES: VOA SCAN

CUSTODY LOG
How Shipped | Date
Legal Seal No 22312 - 22313
Received by
Legal Seal Condition: intact

STALLION - DOWN GRADIENT

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

1,1,2 Trichloroethane 40. ug/l.
Tetrachloroethylene 20. ug/l.
Toluene 100. ug/l.

Detection limit ~1.0 ug/l.

QUANTITATIVE RESULTS

ANALYSIS	UNITS	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINE)
Vinyl Chloride	ug/l		40.
Methylene chloride	ug/l		270.
1,1 Dichloroethylene	ug/l		3600.
1,1 Dichloroethane	ug/l		400.
trans-1,2 Dichloroethylene	ug/l		6.6
cis-1,2 Dichloroethylene	ug/l		35.
Chloroform	ug/l		3.4
1,2 Dichloroethane	ug/l		265.
1,1,1 Trichloroethane	ug/l		18500.
Trichloroethylene	ug/l		30000.

ANALYST: Susan C. Kerr (SIGNATURE) DATE 7/22/88

NPL 005 3860

132/ 6117046

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number ORG- 5915
Date Received 7/15/88

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER
Well ~~B~~ B-1A	WESTINGHOUSE	BEAVER PLANT	2517

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME/PHONE NUMBER	TYPE TR	STD ANALYSIS
BEAVER	VANPORT		ERIC MANGES 8-645-7095		

CARD (3) | ID CODE (ALL CARDS) 4-10 (City, Mun, T, Est, Case, Fac) | LATITUDE 8-10 | LONGITUDE 11-18 | DATE 19-24 (M D Y) | TIME 25-28 (Hr Min) | INC. 29

	0	0	07/14/88	2 0 0

USGS Q 30 34 | BUREAU 35-37 AMIS | SAMPLE NUMBER 38-43 | STREAM NAME 44-57 | RELATIVE POINT 58

	BWM	251752		

FULL DESCRIPTION WHERE SAMPLE TAKEN

MONITORING WELL B-~~28~~ 1A
SHALLOW - INSIDE PLANT

ADDITIONAL LAB ANALYSES
VOA - SCAN

CUSTODY LOG
How Shipped
Date
Legal Seal No 221316 - 17
Received by
Legal Seal Condition intact SKer

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

Detection limit ~1.0 ug/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINES)
Methylene chloride	ug/l		8.0
1,1 Dichloroethylene	ug/l		5.0
1,1 Dichloroethane	ug/l		9.8
trans-1,2 Dichloroethylene	ug/l		4.2
1,1,1 Trichloroethane	ug/l		24.
Trichloroethylene	ug/l		86.
Toluene	ug/l		13.
cis-1,2 Dichloroethylene	ug/l		7.5
Acetone	ug/l		180.
Xylenes	ug/l		est ~ 2.0

ANALYST Susan G. Ker (SIGNATURE) DATE 7/22/88

WDL 005 3861

132/ 6117047

ER BL 131
7/83

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number OKe-5914
Date Received 7/15/88

ESTABLISHMENT: Well B-1B | CASE: WESTINGHOUSE | FACILITY: BEAVER PLANT | COLL NUMBER: 2517
COUNTY: BEAVER | MUNICIPALITY: VANPORT | PROGRAM | COLL NAME/PHONE NUMBER: ERIC MANGES 8-645-7095 | TYPE TR | STD ANALYSIS
CARD (1) | ID CODE (ALL CARDS) (5-18) | LATITUDE (4-10) | LONGITUDE (11-18) | DATE (19-24) M D Y | TIME (25-28) | KIND (29)
0 | 07 14 88 | 11 35
USGS QUAD (31-34) | BUREAU (35-37) AMIS | SAMPLE NUMBER (38-43) | STREAM NAME (44-57) | RELATIVE POINT (58)
BWM251752 1

FULL DESCRIPTION WHERE SAMPLE TAKEN
Monitoring Well B-1B

ADDITIONAL LAB ANALYSES
VOA - 5:AN

CUSTODY LOG
How Shipped | Date
Legal Seal No 221314
Received by
Legal Seal Condition intact SKar

SHALLOW
ONLY 1 VOA BOTTLE

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

Detection limit ~50. ug/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINES)
1,1 Dichloroethylene	ug/l		185.
1,1 Dichloroethane	ug/l		650.
1,2 Dichloroethane	ug/l		95.
1,1,1 Trichloroethane	ug/l		3300.
Trichloroethylene	ug/l		750.
Toluene	ug/l		75.

ANALYST Susan G Kar (SIGNATURE) DATE 7/22/88

WPL 005 3862

132/ 6117048

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number CNR-5916
Date Received 7/15/88

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER
WELL B-4	WESTINGHOUSE	BEAVER PLANT	2517

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME/PHONE NUMBER	TYPE TR	STD ANALYSIS
BEAVER	VANPORT		ERIC MANGES 8-645-7095		

CARD 1/2	ID CODE (ALL CARDS) 6-16	LATITUDE 6-10	LONGITUDE 11-18	DATE 19-24 (M D Y)	TIME 25-28 (Hr Min)	KIND 29
2	Cnty Mun T Str Case Fac	0		07 14 88	12 / C	

USGS QUAD 30-34	BUREAU 35-37 AMIS	SAMPLE NUMBER 38-43	STREAM NAME 44-57	RELATIVE POINT 58
	BWM	251752 3		

FULL DESCRIPTION WHERE SAMPLE TAKEN

Monitoring Well B-4

ADDITIONAL LAB ANALYSES

VOA - SCAN

CUSTODY LOG

How Shipped _____ Date _____

Legal Seal No 221318-19

Received by _____

Legal Seal Condition intact SKer

Sample - From pump

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

Detection limit ~ 20. ug/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINES)
1,1 Dichloroethylene	ug/l		26.
1,1,1 Trichloroethane	ug/l		820.
Trichloroethylene	ug/l		125.

ANALYST Susan C Kerr (SIGNATURE) DATE 7/22/88

MDL 005 3863

132/ 6117049

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number 020-5917
Date Received 7/15/88

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER
WELL B-5	WESTINGHOUSE	BEAVER PLANT	2517

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME/PHONE NUMBER	TYPE TR	STD ANALYSIS
BEAVER	VANPORT		ERIC MANGES 846-645-7095		

CARD (1)	ID CODE (ALL CARDS) 4-16	LATITUDE 4-10	LONGITUDE 11-18	DATE 19-24	TIME 25-28	KIND 29
1	County:			M D Y	Hr Min	
2	1		0	07 / 08 / 88	1100	

USGS 0 30-34	BUREAU 36-37 AMIS	SAMPLE NUMBER 38-43	STREAM NAME 44-57	RELATIVE POINT 58
	BWM	251752		

FULL DESCRIPTION WHERE SAMPLE TAKEN:

MONITORING WELL B-5
DEEP WELL - PONDERMENT

ADDITIONAL LAB ANALYSES
VOA - SCAN

CUSTODY LOG
How Shipped Date
Legal Seal No 221320-21
Received by
Legal Seal Condition intact

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

Detection limit ~50. µg/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINE)
Trichloroethylene	µg/l		750.

ANALYST Susan C Kan (SIGNATURE) DATE 7/22/88

WPL 005 3864

132/ 6117050

ER BL 131
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab number CRL - 5418
Date Received 7/15/88

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER
Well B-6	Westing House	Beaver Plant	2517

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME/PHONE NUMBER	TYPE TR	STD ANALYSIS
Beaver	Vanport		Eric Manges 8-645-7095		

CARD (3)	ID CODE (ALL CARDS) 6-16	LATITUDE 6-10	LONGITUDE 11-18	DATE 19-24 (M D Y)	TIME 25-28 (Hr Min)	KIND 29
1	City Mun T Est Case Fac		0	07 14 08	11 25	

USGS Q 30 34	BUREAU 35-37 AMIS	SAMPLE NUMBER 38-43	STREAM NAME 44-57	RELATIVE POINT 58
	B WM	251752 5		

FULL DESCRIPTION WHERE SAMPLE TAKEN

Monitoring Well B-6

SHALLOW

ADDITIONAL LAB ANALYSES

VOA - SCAN

CUSTODY LOG

How Shipped _____ Date _____

Legal Seal No. 22322 - 23

Received by _____

Legal Seal Condition intact & Kar

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

Detection limit ~50. ug/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINES
1,1 Dichloroethane	ug/l		330.
1,1,1 Trichloroethane	ug/l		850.
Trichloroethylene	ug/l		900.

ANALYST Susan L. Kar (SIGNATURE) DATE 7/22/88

WDL 005 3865

132/ 6117051

ER BL 131
7/82

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF LABORATORIES
SPECIAL ANALYSES REPORT

Lab Number CRG-5918
Date Received 7/15/88

ESTABLISHMENT	CASE	FACILITY	COLL NUMBER
Well B-7	WESTINGHOUSE	BEAVER PLANT	2517

COUNTY	MUNICIPALITY	PROGRAM	COLL NAME/PHONE NUMBER	TYPE TR	STD ANALYSIS
BEAVER	VANPORT		ERIC MANGES 8-645-7095		

CARD (1)	IO CODE (ALL CARDS) 4-16	LATITUDE 4-10	LONGITUDE 11-18	DATE 19-24	TIME 25-28	KIND 29
1 2	Cnty Mun T Est Case Fac		0	M D Y: 07 14 88	Hr Min: 10 37	

USGS Q 30-34	BUREAU 35-37 AMIS	SAMPLE NUMBER 38-43	STREAM NAME 44-57	RELATIVE POINT 58
	BWM	251756		

FULL DESCRIPTION WHERE SAMPLE TAKEN: Monitoring Well B-7

ADDITIONAL LAB ANALYSES: VOA - SCAN

CUSTODY LOG
How Shipped: Date:
Legal Seal No 221324-25
Received By
Legal Seal Condition: intact SKar

SAMPLE:

QUALITATIVE REPORT

DO NOT WRITE BELOW THIS LINE

1,1,2 Trichloroethane	6.9 µg/l.
Tetrachloroethylene	26 µg/l.
Toluene	25. µg/l.
Acetone	est ~ 180. µg/l.
2-Butanone (MEK)	270. µg/l.

Detection limit ~ 1.0 µg/l.

QUANTITATIVE RESULTS

ANALYSIS:	UNITS:	ANALYSIS CODE	RESULTS (SHOW DECIMAL POINTS ON LINE)
Vinyl Chloride	ug/l		est ~ 200.
Methylene chloride	ug/l		690.
1,1 Dichloroethylene	ug/l		550.
1,1 Dichloroethane	ug/l		425.
trans-1,2 Dichloroethylene	ug/l		62.
cis-1,2 Dichloroethylene	ug/l		155.
Chloroform	ug/l		3.3
1,2 Dichloroethane	ug/l		33.
1,1,1 Trichloroethane	ug/l		475.
Trichloroethylene	ug/l		48000.

ANALYST Susan C. Kar (SIGNATURE) DATE 7/22/88

WPL 005 3866

132/ 6117052