

TGG: ~~JCL~~: ERT: ~~MJR~~: AJO: RF
XF: none

TO: Distribution

FROM: T. G. Grumbles

DATE: July 23, 1990

Interoffice
Communication

SUBJ: TUFTS UNIVERSITY REPORT

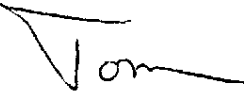
VISTA

Many months ago Vista agreed to participate in a Tufts University Center for Environmental Management study on corporate responses to SARA Title III. The Aberdeen facility as a user of VCM was used as a plant in the study. The final report is attached.

The report is favorable to the industry and demonstrates that we are certainly doing as good as some larger companies in many of the organizational areas studied.

The report is provided for your review. It also contains some good information on customer and competitor organizations in safety, health and environmental areas.

The Aberdeen plant also received a copy.



T. G. Grumbles

dlj
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Attachment

Distribution: T. H. Huffman, J. A. DeBernardi, R. D. Gamblin, M.
S. Reynolds, W. L. McClain, R. T. Ferrell, J. D.
Burns

cc: w/o attachment - R. W. Seymour-Aber

VVV 000001077

TGG: JCL: ERT: MJH: AJO: RF
XF: _____

TO: Distribution

FROM: T. G. Grumbles
DATE: January 5, 1990

Interoffice
Communication

SUBJ: CONE PENETROMETER RESULTS REVIEW MEETING JANUARY 4, 1990

VISTA

The meeting was held in Ponca City to review the results of the Cone Penetrometer work done at the LCVCM plant the week of December 4, and determine needed actions based on the results. Below are the action items and a summary of discussions from the meeting. Attendees of the meeting are listed below in distribution.

Action Items

1. It was decided that further on-site exploration in the 25 foot zone and off-site down to the 50 foot aquifer needs to be done.
2. Additional off-site work would be done based on the 200 foot grid plan approach used previously.
3. An attempt will be made to do the penetrometer work on public land, such as the roads and right-of-ways.
4. Mike Hayes will pursue getting permission from the parish for the work on public roads.
5. Mike Hayes and a Conoco PR representative will work on the public relations preparedness such as if-asked statements, and preparing the truck operators for questions.
6. Conoco estimates the cost for the work will be approximately \$2,500 per day. The costs will be shared according to the existing cost-sharing agreement.
7. Gary Wojnowski will talk to IT about our plans and get them involved as appropriate.
8. David Booth will check with Paul Fetzer to assure he can run the water samples as needed, and to determine if he can run soil samples.
9. A draft report on the initial penetrometer work will be drafted and distributed in approximately two weeks.
10. Gary Wojnowski will write needed change orders for IT work.
11. Gary Wojnowski will provide Charlie Bleckman with examples of current field plans DEQ has approved. These will be used to begin extracting similar information out of the penetrometer truck operating manual. This will ultimately be needed for final report submittal to the state.

12. Vista will provide the initial probing of locations to be used in the next phase of work.
13. Conoco will ask Vista to provide containers for any needed waste disposal.
14. Vista will get some lighted barricades to be used at drill sites during the time the hole is still open.
15. David Booth will lay-out a grid of drill locations on a map and fax to Joel Wilson in Ponca for review.
16. David Booth will identify an engineer to provide on-site assistance during the off-site work.
17. The truck will be in Lake Charles on January 24th to begin work.
18. David Booth will contact DEQ (local and Baton Rouge) to discuss the work to be done.

Summary of Discussions

1. The cone penetrometer results were reviewed to determine if the technology worked in this application. In general, it was decided that the cone penetrometer worked and could be used for the additional work as identified.

The potential for down-hole contamination and qa/qc aspects of soil and water sampling were discussed. In general, these issues are adequately addressed with existing procedures.

The truck had some difficulties in reaching the 80 foot sands and in some cases the 50 foot sand. However, it is felt that with some modification of procedures these difficulties can be overcome. The 80 foot exploration will be attempted again after the off-site "shallow" work is completed.

In summary, the truck works, and provides a cheaper, more discrete method of obtaining soil and water samples, with much less waste generation.

2. The sampling results were reviewed (attached). Based on these results, It was decided that off-site work was necessary to further define the extent of contamination in the 10, 25, and 50 foot aquifers. In general, the concerns are:

1. 25-foot contamination extent on-site.
2. 25 and 50 foot potential contamination off-site
3. Impact of 1 and 2 on the design of the remediation system.

How to proceed was discussed and it was decided that a 200 foot grid concept, similar to previous rate and extent exploration, would be used.

The possibility of siting drill sites on the roads or right-

of-ways in Mossville was discussed. This would avoid potential issues with getting permission from land owners. This approach will be pursued and actions needed are reflected in the action items.

A draft report of the initial penetrometer work will be issued in 2 weeks.

3. The need to complete the 80 foot exploration work, as originally planned, was discussed. It was decided that after we do the off-site shallow work, another attempt will be made to use the penetrometer to finish this work.

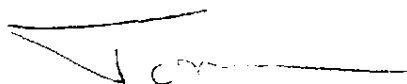
Following are additional groundwater project items discussed.

1. The annual well monitoring will be scheduled for the week of March 5. Conoco will provide assistance and work with Dave Booth on the details.
2. There is a general concern regarding the status of the VD-1 P & A work. David Lourie has been very slow to respond to our requests and his draft report falls short of answering key questions. We will work to get final reports from Lourie and consider a meeting with G & M to discuss the results of the P & A activity and inspections.
3. Tom Grumbles will contact Wendy Call to request that she prepare a summary of the air stripping feasibility/pilot study contractor proposals and recommendations, and begin to schedule a meeting to review proposals and interview contractors.
4. The instillation of TFZ-7 was discussed. Gary Wojnowski will provide final comments to IT on their draft report and get it issued. David Booth will send the report to the State for approval.

Gary Wojnowski will instruct IT to plan to proceed with identified P & A activities and instillation of TFZ-7 during the first week of February. The two abandoned copper pit area wells will be included in the P & A work. Stam-Schele should be used for P & A work.

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5. The decreasing stream factor of the tank farm remediation wells was reviewed. It was decided to ask Stam-Schele to "de-silt" the recovery wells while in the plant for P & A activities.



T. G. Grumbles

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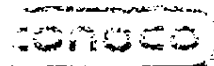
Distribution: Jack Neeld, Gary Wojnowski, Joel Wilson-Conoco (by phone)

Bob Huddleston, Dave Richter, Charles Bleckman

David Booth-LCVCM, W. L. McClain

cc: M. G. Hayes-LCCP, E. R. Taylor

VVV 000001081



1/4/90

Research and Engineering Department

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P.O. Box 1267
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(405) 767-3456

PRELIMINARY RESULTS
CONE PENETROMETER TRUCK TESTING
VISTA LAKE CHARLES VCM PLANT

TYPES AND DEPTHS OF COMPLETED PENETROMETER WORK (x denotes detectable cpds.)

BORING NO.	LOCATION	DEPTH(ft)	TYPE OF WORK	ANALYSES
1	Near VD-2	57.4	Stratigraphy	N/A
1	"	64.0	Stratigraphy	N/A
5	250' N. of TFZ-5	66.1	Strat. & Soil	YES x
5	"	65.9	Stratigraphy	N/A
5	"	14.2	Soil	YES
5	"	24.0	Soil	NO
5	"	25.5	Soil	YES x
5	"	38.2	Soil	NO
5	"	43.7	Soil	NO
5	"	53.0	Soil	NO
6	500' N. of TFZ-5	8.6	Soil	YES
6	"	23.8	Soil	NO
6	"	24.0	Soil-Water	YES xx
6	"	27.0	Stratigraphy	N/A
7	W. of TFZ-5	8.6	Soil	NO
7	"	20.5	Soil	NO
7	"	21.1	Water	YES x
7	"	23.0	Soil	YES x
7	"	28.1	Stratigraphy	N/A
7	"	66.9	Stratigraphy	N/A
7	"	68.9	Soil	NO
7	"	69.0	Soil	NO
7	"	67.1	Water	YES x

two
diff.
cones
(piezometric)

truck test
compared to well
logs

still to
do

VISTA
Analysis

4 holes

4 holes

VVV 000001082



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PRELIMINARY RESULTS (CONT.)

<u>BORING NO.</u>	<u>LOCATION</u>	<u>DEPTH (ft)</u>	<u>TYPE OF WORK</u>	<u>ANALYSES</u>
11	760' N. of TFZ-5	8.5	Soil	YES
11	"	23.2	Soil	YES
11	"	28.0	Stratigraphy	N/A

VVV 000001083



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Preliminary

~~TEMPORARY~~ DATA REPORT FOR LAKE CHARLES VISTA SOIL SAMPLES ANALYSES

Six soil samples were extracted with MeOH. Aliquots of each extract was analyzed by GC/MS. METHOD: 8240

Reportable Cmpds. only (values greater than 5 ppb)

<u>BORING NO.</u>	<u>DEPTH(ft)</u>	<u>COMPOUNDS</u>	<u>AMOUNT(ug/kg)</u>
5	25.5	1,2-dichloroethane	20667
		1,1,2-trichloroethane	2417
5	66.1	1,2-dichloroethane	4420
6	8.6	All cmpds. below reporting levels at above conditions.	N/A
7	23.0	*1,2-dichloroethane	27778
		1,1,2-trichloroethane	4597
11	8.5	All cmpds. below reporting levels at above conditions.	N/A
11	23.2	All cmpds. below reporting levels at above conditions.	N/A

* Actual value exceeded largest calibration standard.

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VOLATILE ORGANICS REPORT
TEMPORARY DATA REPORT FOR LAKE CHARLES VISTA WATER SAMPLES ANALYSES

SAMPLE ID: LCV-06-89 (Location boring No. 6-depth 24.0 ft.)
 ENV. NUMBER: ENV000000 CUSTOMER: LAKE CHARLES
 METHOD NUMBER: 8240
 GC/MS RUN: IV1642 DATE SAMPLED
 BLANK RUN: IV1634 DATE ANALYZED 12/28/89
 TUNE RUN: IV1632 DILUTION FACTOR 1000
 DAILY CALL: IV1635 MSVO4
 SPIKE RUN: IV1652
 DUP SPIKE RUN: IV1653

REPORTED BY: _____

VERIFIED BY: _____

1,2-DICHLOROETHANE-D1	SURROGATE	104 % REC
4-BROMOFLUOROBENZENE	SURROGATE	92 % REC
TOLUENE-D8	SURROGATE	96 % REC

CONCENTRATION

CHLOROMETHANE	< 40000 ug/L
VINYL CHLORIDE	< 40000 ug/L
BROMOMETHANE	< 20000 ug/L
CHLOROETHANE	< 40000 ug/L
TRICHLOROFLOROMETHANE	< 20000 ug/L
1,1-DICHLOROETHYLENE	< 80000 ug/L
METHYLENE CHLORIDE	< 20000 ug/L
TRANS-1,2-DICHLOROETHYLENE	< 20000 ug/L
1,1-DICHLOROETHANE	< 20000 ug/L
CHLOROFORM	< 20000 ug/L
1,1,1-TRICHLOROETHANE	< 20000 ug/L
CARBON TETRACHLORIDE	< 20000 ug/L
BENZENE	< 20000 ug/L
1,2-DICHLOROETHANE	320000 ug/L
TRICHLOROETHYLENE	< 20000 ug/L
1,2-DICHLOROPROPANE	< 20000 ug/L
BROMODICHLOROMETHANE	< 20000 ug/L
2-CHLOROETHYL VINYLETHER	< 100000 ug/L
CIS-1,3-DICHLOROPROPENE	< 20000 ug/L
TOLUENE	< 20000 ug/L
TRANS-1,3-DICHLOROPROPENE	< 20000 ug/L
1,1,2-TRICHLOROETHANE	22000 ug/L
TETRACHLOROETHYLENE	< 20000 ug/L
DIBROMOCHLOROMETHANE	< 20000 ug/L
CHLOROBENZENE	< 20000 ug/L
ETHYLBENZENE	< 20000 ug/L
BROMOFORM	< 20000 ug/L
1,1,2,2-TETRACHLOROETHANE	< 20000 ug/L
1,3-DICHLOROBENZENE	< 20000 ug/L
1,4-DICHLOROBENZENE	< 20000 ug/L
1,2-DICHLOROBENZENE	< 20000 ug/L

VVV 000001085

TEMPORARY DATA REPORT FOR LAKE CHARLES VISTA WATER SAMPLES ANALYSES

SAMPLE ID: 12/5/89 (Location boring No. 7-depth 21.1)
 ENV. FILE: 12/5/89 CUSTOMER: LAKE CHARLES
 METHOD NUMBER: 12/5/89
 GC/MS ANAL: 12/5/89 DATE SAMPLED: 12/5/89
 BLANK RUN: IV1660 DATE ANALYZED: 01/03/90
 TUNE RUN: IV1660
 CALIB: IV1660
 DILUTION FACTOR: 1.0

REPT. NO.:

REPORTED BY: _____

VERIFIED BY: _____

1,2-DICHLOROETHANE-DC	SURROGATE	104 % REC
TOLUENE-DM	SURROGATE	87 % REC
4-BROMOFLUOROBENZENE	SURROGATE	94 % REC

CONCENTRATION

CHLOROMETHANE	<	10 ug/L
VINYL CHLORIDE	<	10 ug/L
BROMOMETHANE	<	5 ug/L
CHLOROETHANE	<	10 ug/L
TRICHLOROFLUOROMETHANE	<	5 ug/L
1,1-DICHLOROETHYLENE	<	20 ug/L
METHYLENE CHLORIDE	<	5 ug/L
TRANS-1,2-DICHLOROETHYLENE	<	5 ug/L
1,1-DICHLOROETHANE	<	5 ug/L
CHLOROFORM	<	5 ug/L
1,1,1-TRICHLOROETHANE	<	5 ug/L
CARBON TETRACHLORIDE	<	5 ug/L
BENZENE	<	5 ug/L
1,2-DICHLOROETHANE	<	164 ug/L
TRICHLOROETHYLENE	<	5 ug/L
1,2-DICHLOROPROPANE	<	5 ug/L
BROMODICHLOROMETHANE	<	5 ug/L
2-CHLOROETHYL VINYL ETHER	<	25 ug/L
CIS-1,3-DICHLOROPROPENE	<	5 ug/L
TOLUENE	<	5 ug/L
TRANS-1,3-DICHLOROPROPENE	<	5 ug/L
1,1,2-TRICHLOROETHANE	<	8 ug/L
TETRACHLOROETHYLENE	<	5 ug/L
PERBROMOCHLOROMETHANE	<	5 ug/L
CHLOROBENZENE	<	5 ug/L
ETHYLBENZENE	<	5 ug/L
BROMOFORM	<	5 ug/L
1,1,2,2-TETRACHLOROETHANE	<	5 ug/L
1,3-DICHLOROBENZENE	<	5 ug/L
1,4-DICHLOROBENZENE	<	5 ug/L
1,2-DICHLOROBENZENE	<	5 ug/L

VVV 000001086

VOLATILE ORGANICS REPORT
TEMPORARY DATA REPORT FOR LAKE CHARLES VISTA WATER SAMPLES ANALYSES

SAMPLE ID: LCV-074-03 (Location boring No. 7-depth 67.1 ft.)
 ENV. NUMBER: ENV000000 CUSTOMER: LAKE CHARLES
 METHOD: 8261
 GC/MS RUN: IV1610 DATE SAMPLED: 12/5/89
 BLANK RUN: IV1611
 TUNE RUN: IV1608
 DAILY CAL: IV1625 DILUTION FACTOR: 1.0
 SPIKE RUN: IV1652 MSVOA
 DUP SPIKE RUN: IV1653

REPORTED BY: _____

VERIFIED BY: _____

1,1-DICHLOROETHANE 1.0 SURROGATE 100 % REC
 1,2-DICHLOROETHANE 1.0 SURROGATE 8 % REC
 TOLUENE 1.0 SURROGATE 1.2 REC

	CONCENTRATION
CHLOROMETHANE	< 10 ug/L
VINYL CHLORIDE	< 10 ug/L
BROMOMETHANE	< 5 ug/L
CHLOROETHANE	< 10
TRICHLOROFLUOROMETHANE	< 5
1,1,1-TRICHLOROETHANE	< 20
ETHYLENE CHLORIDE	< 5 ug/L
TRANS-1,2-DICHLORDETHYLENE	< 5 ug/L
1,1-DICHLOROETHANE	< 5 ug/L
CHLOROFORM	< 5 ug/L
1,1,1-TRICHLOROETHANE	< 5 ug/L
CARBON TETRACHLORIDE	< 5 ug/L
PERCHLOR	< 5
1,2-DICHLOROETHANE	170
TRICHLOROETHYLENE	< 5 ug/L
1,2-DICHLOROETHANE	< 5 ug/L
BROMODICHLOROMETHANE	< 5 ug/L
2-CHLORODETHYLENE	< 5 ug/L
CIS-1,3-DICHLOROPROPENE	< 25 ug/L
TOLUENE	< 5 ug/L
TRANS-1,3-DICHLOROPROPENE	< 5 ug/L
1,1,1,2-TRICHLOROETHANE	< 9 ug/L
TETRACHLOROETHYLENE	< 5 ug/L
DIBROMOCHLOROMETHANE	< 5 ug/L
CHLOROBENZENE	< 5 ug/L
ETHYLENE CHLORIDE	< 5 ug/L
1,1,1,2,2-PENTACHLOROETHANE	< 5 ug/L
1,1,2,2-TETRACHLOROETHANE	< 5 ug/L
1,2-DICHLOROBENZENE	< 5 ug/L
1,1-DICHLOROBENZENE	< 5 ug/L
1,2-DICHLOROBENZENE	< 5 ug/L

SAMPLE ANALYZED AT VISTA

PRIORITY POLLUTANTS

Volatile Organic Fraction

All Results in ug/l

SAMPLE SOURCE: LCV-06-03 12/04/89 (boring No.6,depth_24.0 ft)

PARAMETER	RESULT	MDL
VINYL CHLORIDE	*1617	0.66
BROMOMETHANE	<500	0.57
CHLOROETHANE	<500	1.47
1,1-DICHLOROETHENE	*726	0.78
METHYLENE CHLORIDE	<500	0.52
TRANS-1,2-DICHLOROETHENE	*596	0.71
1,1-DICHLOROETHANE	*827	0.46
CHLOROFORM	*2957	1.48
1,1,1-TRICHLOROETHANE	<500	0.85
CARBON TETRACHLORIDE	<500	0.81
BENZENE	<500	0.26
1,2-DICHLOROETHANE	**436933	1.06
TRICHLOROETHENE	<500	0.66
1,2-DICHLOROPROPANE	<500	0.46
BROMODICHLOROMETHANE	<500	0.40
2-CHLOROETHYL VINYL ETHER	<500	0.52
CIS-1,3-DICHLOROPROPENE	<500	0.25
TRANS-1,3-DICHLOROPROPENE	<500	0.25
TOLUENE	<500	0.17
1,1,2-TRICHLOROETHANE	*25652	0.19
TETRACHLOROETHENE	<500	0.60
DIBROMOCHLOROMETHANE	<500	0.27
CHLOROBENZENE	<500	0.28
ETHYL BENZENE	<500	0.16
BROMOFORM	<500	0.14
1,1,2,2-TETRACHLOROETHANE	<500	0.64
TRICHLOROFLUOROMETHANE	<500	1.07
CHLOROMETHANE	<500	1.59
1,3-DICHLOROBENZENE	<500	1.07
1,2-DICHLOROBENZENE	<500	0.68
1,4-DICHLOROBENZENE	<500	0.32

DATE OF ANALYSIS: 12/05/89

ANALYST: JCC

ND-NOT DETERMINED

*-DONE ON X500 DILUTION

NF-NOT FOUND

**--DONE ON X2500 DILUTION

BMDL-BELOW DETECTION LIMITS

RESULTS CORRECTED FOR METHOD BLANK

VVV 000001088

SAMPLE ANALYZED AT VISTA
PRIORITY POLLUTANTS
Volatile Organic Fraction

All Results in ug/l

SAMPLE SOURCE: LCV-7A-03 12/06/89 (boring No.7_depth,21.1 ft.)

PARAMETER	RESULT	MDL
VINYL CHLORIDE	BMDL	0.66
BROMOMETHANE	BMDL	0.57
CHLOROETHANE	BMDL	1.47
1,1-DICHLOROETHENE	BMDL	0.78
METHYLENE CHLORIDE	0.58	0.52
TRANS-1,2-DICHLOROETHENE	BMDL	0.71
1,1-DICHLOROETHANE	BMDL	0.46
CHLOROFORM	bmdl	1.48
1,1,1-TRICHLOROETHANE	BMDL	0.85
CARBON TETRACHLORIDE	BMDL	0.81
BENZENE	BMDL	0.26
1,2-DICHLOROETHANE	*165.9	1.06
TRICHLOROETHENE	BMDL	0.66
1,2-DICHLOROPROPANE	BMDL	0.46
BROMODICHLOROMETHANE	BMDL	0.40
2-CHLOROETHYL VINYL ETHER	BMDL	0.52
CIS-1,3-DICHLOROPROPENE	BMDL	0.25
TRANS-1,3-DICHLOROPROPENE	BMDL	0.25
TOLUENE	BMDL	0.17
1,1,2-TRICHLOROETHANE	6.97	0.19
TETRACHLOROETHENE	BMDL	0.60
DIBROMOCHLOROMETHANE	BMDL	0.27
CHLOROBENZENE	BMDL	0.28
ETHYL BENZENE	BMDL	0.16
BROMOFORM	BMDL	0.14
1,1,2,2-TETRACHLOROETHANE	BMDL	0.64
TRICHLOROFLUOROMETHANE	BMDL	1.07
CHLOROMETHANE	BMDL	1.59
1,3-DICHLOROBENZENE	BMDL	1.07
1,2-DICHLOROBENZENE	BMDL	0.68
1,4-DICHLOROBENZENE	BMDL	0.32

DATE OF ANALYSIS: 12/07/89

ANALYST: JCC

ND-NOT DETERMINED

*-DONE ON X10 DILUTION

NF-NOT FOUND

BMDL-BELOW DETECTION LIMITS

RESULTS CORRECTED FOR METHOD BLANK

VVV 000001089