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DMB

USEcology

27-39

MEMORANDUM

TO: Steering Committee Members

FROM: Ronald K. Gaynor RKG

DATE: July 7, 1982

SUBJECT: Tritium Migration Investigation

Attached is a summary of the technical update meeting held on June 10 to evaluate Phase 1 of the tritium investigation. Also included is the most recent sampling and analysis data which has been received, and a map showing the proposed location for the wells to be drilled under Phase 2 of the investigation. Bid documents have been mailed to the potential drilling contractors and it is currently anticipated that a drilling crew should be mobilized during the first week in August. Obviously, this represents a delay in the proposed schedule of about three weeks.

Additionally, a lease was signed for the property east of the road on June 16 and will remain in effect until June 15, 1983.

If there are any corrections or additions to the meeting summary, please notify me and they will be included in the next monthly report.

RKG/ey

Attachments

cc: Thomas M. Johnson
Howard Chinn
David L. Siefken
J. B. Foster
Dave Ed
James Shaffner
Marty Schumacher

JUL 13 1982

IE:06

SUMMARY

Results of Technical Update Meeting on Tritium Migration Investigation at the Sheffield LLWD Site

June 10, 1982

The meeting convened at 10:00 a.m., June 10, 1982, in the USGS office in Champaign-Urbana, Illinois. The following were in attendance:

Name	Representing	Steering Committee
Jim Grant	Law Eng.	
Dave Ed	IDNS	x
Tom Borecki	AG	
Dave Siefken	NRC	x
Tim Larson	IGS	
Tom Johnson	IGS	x
Buck Foster	USGS	x
Richard Healy	USGS	
Ron Gaynor	US Ecology	x
Walt Hipsher	US Ecology	

The meeting was opened with a synopsis of the Phase 1 investigation presented by Buck Foster. The first eight (8) wells were constructed and located as originally planned and the pebbly sand zone was found to be thickest in the area of wells 580, 563, 583 and 575 (see attached exhibits). Tritium has been found in new wells 580 (on US Ecology property) and 583 (property east of the road), and all available data seemed to indicate a relatively narrow path of migration. The levels of tritium found were 35 and 6 nanocuries/liter, respectively.

Following is a listing of information provided at the meeting:

1. Laboratory analyses of soil samples from wells 560-574
2. Tritium analyses from samples taken May 10, 1982
3. Tritium analyses from samples taken May 20, 1982
4. Water level elevations on May 20, 1982
5. Preliminary resistivity survey contours
6. Preliminary equal potential map based on recent groundwater levels
7. Contours of the top of the Pennsylvanian shale
8. Contours of the top of the pebbly sand
9. Mapped locations for all new wells
10. Preliminary boring logs for wells 579-584
11. Tabulated thickness of the pebbly sand

All members of the committee agreed that enough information had been gathered to proceed with a Phase 2 investigation. The following items were identified for this phase:

1. Investigate the details of the site water supply well.

   a. Attempt to locate boring log
   b. Determine water level and depth of well
   c. Add well to sampling and analysis program
   d. USGS to perform gammy ray log

2. Add eight (8) new monitoring wells, four (4) on US Ecology property, one (1) on site south of Trench 23 and three (3) east of well 581.

US Ecology reported on the progress of lease agreements which are expected to be completed within the next 2-3 weeks.

Due to group concerns regarding well development, it was decided that the drilling method should be modified. Buck Foster will be providing US Ecology with drilling and construction specification details for subsequent contracting with an independent driller.

The committee agreed to a tentative schedule for the Phase 2 investigation as follows:

1. Mobilize drill crew and equipment - July 12

2. Complete drilling and well installation - July 26

3. Complete well development and initial sampling - July 30

4. Complete temperature and resistivity survey and reports (IGS) - August 1

5. Complete initial sampling analysis - August 9

6. Complete laboratory soil inspections and initial analysis - August 16

7. Complete investigation on site water well and all gamma ray logging - July 30

8. Review meeting on results of Phase 2. USGS in Urbana at 10:00 a.m. - August 26

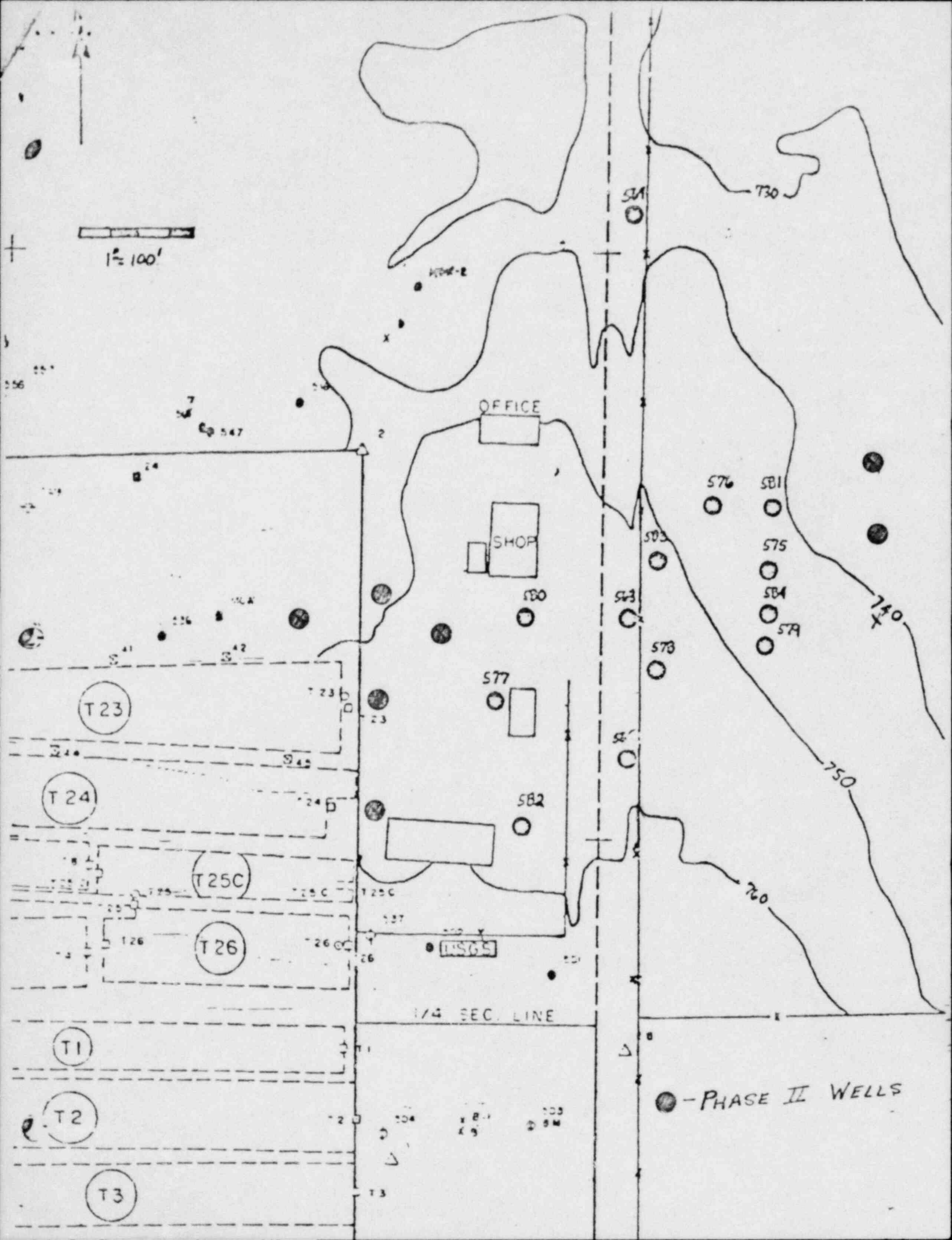
Sampling and Analysis Data

Well	Date	Sampled By	Split With	Results/Comments	(Picocuries/liter)
USGS 563	3/19/81	USGS Not analyzed 5/4/82	US Ecology	88300 ± 8800	US Ecology Results
USGS 575	3/19/82	USGS Not analyzed 5/4/82	US Ecology	66500 ± 6700	US Ecology Results
USGS 560	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	1300 ± 400	US Ecology Results
USGS 561	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	800 ± 300	US Ecology Results
USGS 562	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 563	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	89000 ± 9000	US Ecology Results
USGS 564	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	500 ± 400	US Ecology Results
USGS 565	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 566	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 567	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 568	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	None Received	US Ecology Results
USGS 569	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 570	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 571	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	None Received	US Ecology Results

Well	Date	Sampled By	Split With	Results/Comments	(Picocuries/liter)
USGS 572	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 573	Week of 5/22/82	IdNS Not analyzed 5/4/82	US Ecology	1400 ± 400	US Ecology Results
USGS 574	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	< 500	US Ecology Results
USGS 575	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	68400 ± 7000	US Ecology Results
USGS 576	Week of 3/22/82	IDNS Not analyzed 5/4/82	US Ecology	900 ± 400	US Ecology Results
USGS 560	4/26/82	IDNS	US Ecology	< 2000	US Ecology Results
USGS 563	4/26/82	IDNS	US Ecology	86000 ± 8600	US Ecology Results
USGS 564	4/26/82	IDNS	US Ecology	< 2000	US Ecology Results
USGS 565	4/26/82	IDNS	US Ecology	< 2000	US Ecology Results
USGS 575	4/26/82	IDNS	US Ecology	34000 ± 3400	US Ecology Results
USGS 576	4/26/82	IDNS	US Ecology	< 2000	US Ecology Results
USGS 563	5/10/82	USGS	US Ecology	81300 ± 8100	US Ecology Results
USGS 575	5/10/82	USGS	US Ecology	43000 ± 4300	US Ecology Results
USGS 577	5/10/82	USGS	US Ecology	100 ± 60	US Ecology Results
USGS 578	5/10/82	USGS	US Ecology	< 100	US Ecology Results
USGS 579	5/10/82	USGS	US Ecology	< 100	US Ecology Results
USGS 580	5/10/82	USGS	US Ecology	29900 ± 3000	US Ecology Results
SGS 582	5/10/82	USGS	US Ecology	< 100	US Ecology Results

Well	Date	Sampled By	Split With	Results/Comments	(Picocuries/liter)
USGS 583	5/10/82	USGS	US Ecology	3680 ± 370	US Ecology Results
USGS 584	5/10/82	USGS	US Ecology	< 100	US Ecology Results
USGS 577	5/21/82	USGS	IDNS/US Ecology	< 400	US Ecology Results
USGS 578	5/21/82	USGS	IDNS/US Ecology	700 ± 400	US Ecology Results
USGS 579	5/21/82	USGS	IDNS/US Ecology	500 ± 400	US Ecology Results
USGS 580	5/21/82	USGS	IDNS/US Ecology	35000 ± 400	US Ecology Results
USGS 581	5/21/82	USGS	IDNS/US Ecology	USGS 400 ± 400 US Ecology < 120	US Ecology Results
USGS 582	5/21/82	USGS	IDNS/US Ecology	< 400	US Ecology Results
USGS 583	5/21/82	USGS	IDNS/US Ecology	6200 ± 400	US Ecology Results
USGS 584	5/21/82	USGS	IDNS/US Ecology	700 ± 400	US Ecology Results
USGS 577	5/27/82	USGS	IDNS/US Ecology	600 ± 400	US Ecology Results
USGS 578	5/27/82	USGS	IDNS/US Ecology	500 ± 400	US Ecology Results
USGS 579	5/27/82	USGS	IDNS/US Ecology	< 400	US Ecology Results
USGS 580	5/27/82	USGS	IDNS/US Ecology	39000 ± 400	US Ecology Results
USGS 581	5/27/82	USGS	IDNS/US Ecology	700 ± 400	US Ecology Results
USGS 582	5/27/82	USGS	IDNS/US Ecology	500 ± 400	US Ecology Results
USGS 583	5/27/82	USGS	IDNS/US Ecology	9000 ± 400	US Ecology Results
USGS 584	5/27/82	USGS	IDNS/US Ecology	< 400	US Ecology Results
USGS 563	6/20/82	IDNS	US Ecology	none received	US Ecology Results

Well	Date	Sampled By	Split With	Results/Comments	(Picocuries/liter)
USGS 575	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 576	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 577	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 578	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 579	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 580	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 581	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 582	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 583	6/20/82	IDNS	US Ecology	none received	US Ecology Results
USGS 584	6/20/82	IDNS	US Ecology	none received	US Ecology Results


1" = 100'
OFFICE
SHOP
SB1
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