START

0016346 #5

August 14, 1991

Meeting Minutes Transmittal/Approval
General Topics Past Practices Unit Managers Meeting
450 Hills St., Room 47
Richland, Washington
July 17, 1991

From/
Appvl.: Robert K. Stewart Date: 8/14/91
Robert K. Stewart, R.I. Coordinator, DOE-RL (A6-95)

Appvl.: Pamela S. Innis for Date: 8/14/91
Douglas R. Sherwood, Representative, EPA (B5-01)

Appvl.: Charles L. Cline for L.G. Date 8/14/91
Larry Goldstein, CERCLA Unit Supervisor, Washington Dept. of Ecology

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The purpose of this meeting was to discuss general topics which are common to all past practices operable units.

Meeting Minutes are attached. Minutes are comprised of the following:

- Attachment #1 - Summary of Meeting and Commitments and Agreements
- Attachment #2 - Agenda for the Meeting
- Attachment #3 - Attendance List
- Attachment #4 - Commitments/Agreements Status List
- Attachment #5 - New Task - Operable Unit Consistency
- Attachment #6 - Update on Efforts to Improve Consistency of Work Plans
- Attachment #7 - RCRC/CERCLA Integration
- Attachment #8 - Hanford Site Entry Protocol for Regulatory Agency Personnel
- Attachment #9 - Management of Investigation Derived Waste
- Attachment #10 - Analytical Laboratory Status
- Attachment #11 - Summary of Data Validation Statements of Work
- Attachment #12 - Risk Assessment Methodology Status
- Attachment #13 - Status of the Hanford Borehole Logging Program and Comments on Geophysics
- Attachment #14 - 100 Area Work Plans
- Attachment #15 - Site-Wide Background Studies

Prepared by: Doug Fassett Date: 8/14/91
SWEC, GSSC

Concurrence by: H. W. Lanning Date: 8/14/91
WHC

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General Topics Unit Managers Meeting
July 17, 1991

Distribution:

Dave Einan, EPA (B5-01)
Pam Innis, EPA (B5-01)
Doug Sherwood, EPA (B5-01)
Dan Duncan, EPA, Region 10, RCRA
Chuck Cline, WDOE (two copies)
Dave Nylander, WDOE (Kennewick)
R.O. Patt, Oregon Water Resources Dept.
Ward Staubitz, USGS
Donna Lacombe, PRC
Doug Fassett, SWEC (A4-35)
C.E. Clark, DOE-RL (A6-95)
D.L. Clark, DOE-RL (A5-55)
Julie Erickson, DOE-RL (A6-95)
R.D. Freeberg, DOE-RL (A5-19)
R.E. Gerton, DOE-RL (A4-02)
Jim Goodenough, DOE-RL (A6-95)
Elizabeth A. Bracken, DOE-RL (A5-19)
Mary Harmon, DOE-HQ (EM-442)
Paul Pak, DOE-RL (A6-95)
Jim Rasmussen, DOE-RL (A6-95)
Bob Stewart, DOE-RL (A6-95)
Mike Thompson, DOE-RL (A6-95)
S.H. Wisness, DOE-RL (A6-95)
J.M. Hennig, DOE-RL (A5-21)
John Stewart, USACE
Melvin Adams, WHC (H4-55)
Frank Calapristi, WHC (B2-35)
Steve Clark, WHC (H4-55)
Larry Hulstrom WHC (H4-55)
Wayne Johnson, WHC (H4-55)
Alan Krug, WHC (H4-55)
Merl Lauterbach, WHC (H4-55)
Tim Veneziano, WHC (B2-35)
Fred Roeck, WHC (H4-55)
Jim Patterson, WHC (B2-15)
Steve Weiss, WHC (H4-55)
Tom Wintczak, WHC (L4-92)
R.D. Wojtasek, WHC (L4-92)
Don Kane, EMO (K1-74)
Terri Stewart, PNL (K2-12)
Don Praast, GAO (A1-80)

ADMINISTRATIVE RECORDS: 1100-EM-1, 300-FF-1, 300-FF-5, 200-BP-1, 200-UP-2, 100-HR-1, 100-HR-3, 100-BC-1, 100-BC-5, 100-NR-1, 100-NR-3, 100-FR-1; Care of Susan Wray, WHC (H4-22)

Please inform Doug Fassett (SWEC) of deletions or additions to the distribution list.

Attachment #1

Summary of Meeting and Commitments and Agreements

General Topics Unit Managers Meeting
July 17, 1991

Introductions of New Personnel

WHC: Pauline Mix

DOE-HQ: Mary Harmon

Approval of the June Unit Managers Meeting Minutes

1. The June 19 General Topics Unit Managers Meeting minutes were distributed late (one to two days before the July UMMs). Therefore, there was insufficient time for comments to be made and incorporated into the minutes. Thus, the needed signatures were not acquired on the minutes.

DOE Integration of Past Practice Sites

2. Bill Fryer (SWEC) presented a description of the role of SWEC in assisting DOE-RL in Environmental Restoration Program activities (see Attachment #5). He said item five of the TPA covers the plan for services for Task 3243. The issues related to this task were presented and input on these or other issues, from each organization, was encouraged. Mr. Fryer said he has interviewed DOE and WHC representatives and he will try to talk to representatives of the regulators. Bob Stewart (DOE) stated that this task has evolved considerably since the last TPA change package was produced, and therefore regulator input was needed.

3. Mel Adams (WHC) stated that WHC continues to respond to the DOE Audit regarding work plan consistency (see Attachment #6). WHC has prepared two documents in response to the audit. The first, Geology and Hydrology of the Hanford Site: A Standardized Text for Use in Westinghouse Hanford Company Documents and Reports, is a "standard" document describing Hanford geology and hydrogeology and it is going through the clearance process. The second document, U.S. Department of Energy, "Compendium of Guidance to Improve Consistency of Hanford Field Investigation Work Plans", is to provide Hanford specific guidance in certain key areas of inconsistency and it should be ready for DOE-RL review by the end of July 1991. The regulators and DOE agreed that the second document is still needed. Doug Sherwood (EPA) was assured that physical properties analysis would be included in the second document. The document will be distributed to the regulators for review after a briefing is held for the personnel who will be reviewing the document.

RCRA/CERCLA Integration

4. Fred Ruck (WHC) gave a presentation on RCRA/CERCLA integration (see Attachment #7). He said that there were 60-plus Treatment, Storage and Disposal (TSD) units throughout the operable units. The closure of RCRA TSD units will begin in a number of months so decisions need to be made. He said that there will be joint RCRA/CERCLA meetings held monthly with the next one planned to be held in Seattle on August 7, 1991. The resolution of issues in these meetings will be documented in the meeting minutes and also will be documented and included in the Administrative Record (AR). Merl Lauterbach (WHC) said TSD units will be included in the operable unit work plans. Bob Stewart identified the members of the RCRA/CERCLA working group. They are: Fred Ruck, Merl Lauterbach, Larry Goldstein (Ecology), Toby Michelena (Ecology), Dan Duncan (EPA), Pam Innis (EPA), Raimo Liias (ACE), Bob Stewart, Cliff Clark (DOE), and Eric Goller (DOE).

Update on Inspection Protocols at Past Practice Sites

5. Brad Erlandson (WHC) gave a presentation on Hanford Site Entry Protocol (see Attachment #8). The new protocol is intended to clearly communicate Hanford site access requirements and to provide regulatory agency personnel site access consistent with agency mandates. Mr. Erlandson said he and the WHC compliance group will provide support in site visitation of inspection personnel. The goal of the protocol is that access requirements be consistent regardless of which contractor or facility is to be inspected. Mr. Erlandson said that unannounced inspections can be made, but he needs to know who will be on site for safety reasons especially. Mr. Erlandson said DOE program (unit) managers should be notified, for the time being, when access is needed to past practice sites. Eric Goller (DOE) said a DOE representative should accompany the regulators on inspections to provide an official source of information. Bob Stewart said that if, as in the past, WHC RI Coordinators are notified of an inspection, they should notify Brad Erlandson's office. Mr. Erlandson said the protocol makes DOE and contractor resources available to meet most of the requirements that are established in the protocol. The protocol development team includes: Randy Krekel (DOE), Liz Bracken (DOE), John Jacobson (ACE), Sheldon Coleman (Kaiser), Eric Goller, Casey Ruud (Ecology), PNL, and DOE and WHC safety and security representatives. The protocol document will be released as soon as it is complete, in the meantime Brad Erlandson can be contacted at 376-5969 since he needs to log who visits the site.

Update on Investigation Derived Waste

6. Ed Smith (WHC) gave a presentation on progress in managing investigation derived waste (see Attachment #9). He said it had been proposed that waste would be managed within the operable unit until a Record of Decision (ROD) is signed. However, the substantive requirements of WAC 173-303-360 would be met. Comments from DOE, WHC, EPA and Ecology in working group meetings were incorporated into the strategy document and EII 4.3. Several unresolved issues were identified. The first issue concerned management of personal protection equipment when the area it is issued in is uncontaminated. The second issue concerned the storage

of decontamination rinsate while samples results are in progress. Greg Hopkins (WHC) said one problem they face is receiving sample results within 75 days (as stipulated in the TPA). Larry Goldstein suggested that EII 4.3 be incorporated into Appendix F of the TPA so it would be clear what the parties had agreed to. Julie Erickson (DOE) felt that the strategy document should be the document that is agreed to and followed by all organizations. Doug Sherwood suggested that the strategy document be included in the TPA since EII 4.3 could not be included in the TPA. Bob Stewart suggested a meeting on revising the strategy document so it could be included in Appendix F of the TPA.

NEPA Documentation

7. Dave Shafer (DOE) gave a presentation on NEPA documentation. He stated that the Categorical Exclusion (CX) determination for such things as RI/FSs and removal actions must first go through DOE-RL. The CX then goes to DOE-HQ where it eventually goes to Leo Duffy (DOE) at EM-1. The process for approval takes six to eight weeks. If it is necessary to have a flood plain and wetlands assessment it will follow a path similar to a CX, but the assessment must be published in the Federal Register for comment. The flood plain and wetland assessment must be approved before the CX is approved. The flood plain assessment is expected to determine that the proposed RI/FS activities will have a minimal impact on the flood plain resources. The assessment should probably demonstrate that a categorical exclusion is the proper determination for RI/FS activities. DOE is in the process of trying to get all the CX packages for the 100 Areas to Headquarters.

Update on Laboratory Status

8. Joan Kessner (WHC) gave a presentation on laboratory activities during the past month (see Attachment #10). The major laboratory DOE is working with is Weston. An assessment of this facility will be conducted the week of July 22 and again August. Ecotech is a new laboratory, with a subcontract to Weston, that DOE is working with, but they do not have a procedure in place. The acceptance criteria used by Weston for RAD samples is being evaluated. The turn around time for radioactive samples sent to International Technology Corporation (IT) is being evaluated. Other laboratories are being looked at to determine if their turn around time can be improved. The TPA requirement for turn around time for Radioactive samples is 75 days, and this requirement is not being met due to the volume of samples that are being sent to the labs. Larry Goldstein requested that the Office Sample management provide rationale for relieving the reporting requirements in the TPA for radiochemical data. S-Cubed and TMA were brought on board in May and the first results are awaited.

Action Item GT.109: The surpassing of the turnaround times identified in the TPA for radiochemical sample analyses and the actions that will be taken to improve the turnaround times are to be provided to the regulators in a written document. Action: Joan Kessner (WHC)

Data Validation Strategy

9. Kent Angelos (Golder Associates) gave a presentation on the data validation strategy (see Attachment #11). He said the Golder data validation is intended to be initial support for validation activities on the Hanford site. It takes between five and six man-hours per sample to validate a group of 20 to 30 samples, for a 100% data check. Field screening type data is similarly validated. Mr. Angelos said that the Office of Sample Management (OSM) uses the same criteria that Golder uses to validate data. Doug Sherwood said the partial validation of sample results will be evaluated by EPA. Mr. Angelos said that requirements related to which data EPA will check will be completed by the end of July.

Update on Site Wide Risk Assessment

10. Linda Bergmann (WHC) gave a presentation on a site wide risk assessment methodology (see Attachment #12). She stated that the driving force to develop risk assessment guidance at Hanford is the M-29 series milestones. Two committees were formed to work in this area, a risk assessment committee and a modeling committee. These committees will meet separately, but they will interface to exchange information. A WHC internal draft of the methodology is expected to be completed at the end of September, the document is planned to be given to DOE for review by December 15, and the final document is planned to be out by February 28.

Update on Sitewide Background Studies

11. Jim Hoover (WHC) gave a presentation on the progress of site wide background studies (see Attachment 15). He said the revision of the background document was expected to be completed on schedule at the end of July. Groundwater background data compilation is on schedule and the soil background sampling and analysis plan has been completed. Mr. Hoover said that most of the background soil sampling locations on the Hanford site were in excavation sites or bore holes. A wide variety of soil types will be sampled. Mr. Hoover also suggested that a uniform soil blank matrix be used to help standardize the sample results from different labs. The quality of data from groundwater wells must be evaluated. WHC believes some background ground water constituents are near or above the regulatory limits.

12. Funding for background constituents for FY 91 is for inorganic only, but organic analysis will be included later. Organic analyses will be done at the time the soil samples are collected. Funding for the RAD analyses is still to be obtained. James Patterson (WHC) said funding for the RAD analysis could be obtained in FY 92. Splits of samples will be archived and analyzed for radioactive constituents as funding becomes available. However, existing radioactive constituent data will first be evaluated.

Borehole Geophysics Review

13. Jack Fassett (WHC) addressed the borehole logging program status and the geophysics involved in the program (see Attachment #13). The goal is to be able to identify the different clay mineralogy. He said a spectral-video nuclide logging system is used. He addressed the problem of different rock types in wells and how they can affect readings. WHC is presently gathering data concerning the clay mineralogy that exists at Hanford. A background radiological investigation of the area around Hanford is needed to help evaluate the logging results. It was explained that readings from borings in the Z-1A crib have been determined to be radon decay products. Efforts to calibrate the technique were described. Funding has been requested for calibration chambers for neutron neutron and gamma gamma logging.

Action Item GT.110: DOE, EPA, Ecology and ACE are to provide representatives to participate on the geophysical logging team. This team will set priorities for geophysical funding. Action: John Stewart (USACE), Larry Goldstein, Allan Harris.

Status on Negotiation of 100 Area Rescoping Activities

14. Merl Lauderback (WHC) gave a presentation on the status of 100 area activities (see Attachment #14). Additional information is included in the Aggregate Area Status Unit Managers Meeting. He said that by the end of the week of July 22 the last work plans for the 100 areas (DR-1 and NR) should be revised based on comments. It will then be possible to begin the intrusive work. It is planned that an additional groundwater unit be formed for the F Area. Integration of TSD units will be done first for the 100 area operable units. DOE completed *the latest draft* of Hanford Past Practice Investigation Strategy at the end of June. *The draft is currently under review by the regulators.* The development of risk assessment methodology is on schedule. The integrated schedule and the feasibility studies for the 100 areas were started on July 16.

15. Steve Weiss (WHC) said that a tour of the cultural resource areas is available. Representatives from EPA, Ecology or other organizations are invited on the tour. Mr. Weiss should be informed so that tours can be set up.

UMM Schedule Through November 1991

August	14 and 15
September	18 and 19
October	16 and 17
November	20 and 21

Attachment #2

UNIT MANAGERS MEETING FINAL AGENDA
July 17, 1991

9:00 - 9:15

Approval of June's Unit Managers Meeting Minutes - Doug Fassett

9:15- 9:30

DOE Integration of Past Practice Sites - Bob Stewart/Bill Fryer/Mel Adams

9:30 - 9:45

Update on RCRA/CERCLA Integration - Fred Ruck III

9:45 - 10:00

Update on Inspection Protocols at Past Practices Sites - Brad Erlandson

10:00 - 10:15

Update on Investigation Derived Waste - Bob Stewart/Ed Smith

10:15 - 10:30

DOE Process for Completing NEPA Documentation - Dave Shafer

10:30 - 10:45

Update on Laboratory Status - Joan Kessner

10:45-11:15

Data Validation Strategy - Steve Clark/Kent Angelos

11:15-11:45

Update on Sitewide Risk Assessment - Linda Bergmann

11:45-12:30

Lunch

12:30-1:00

Update on Sitewide Background Studies - Jim Hoover

1:00-1:20

Borehole Geophysics Review - Jack Fassett

1:20-1:50

Status on Negotiation of 100 Area Rescoping Activities - Merl Lauterbach/Alan Krug/Fred Roeck

1:50-2:10

Action Item Status - Doug Fassett

August's Unit Managers Meeting Agenda - Bob Stewart

2:10-4:30

1100-EM-1 - Wendall Greenwald

July 18, 1991

7:30 - 8:30

200-BP-1 - Mark Buckmaster

8:30 - 11:45

300-FF-1 and 300-FF-5 - Larry Hulstrom

11:45 - 12:30

Lunch

12:30-1:00

Update on 100 Areas Characterization Activities - Merl Lauterbach

1:00-3:00

Hanford Past Practices Investigation Strategy - Mike Thompson

Attachment #3

Attendance List

General Topics Unit Managers Meeting
July 17, 1991

Name	Org.	O.U. Role	Phone
Keith, Susan	ANF (G&M)		(206) 869-6321
Allender, Robert	B & C	Ecology Support	(503) 244-7005
Erickson, Julie	DOE-RL	Unit Manager	(509) 376-0496
Goller, Eric	DOE-RL	RCRA Prog. Manager	(509) 376-7326
Goodenough, Jim	DOE-RL	100 Area	(509) 376-7087
Harman, Mary	DOE-HQ	Project Manager	(301) 353-8167
Harris, Allan	DOE-RL	200-BP-1	(509) 376-4339
Hildebrand, R.D.	DOE-RL	SED	(509) 376-7287
Shafer, David	DOE-RL	GW OU Mangr.	(509) 376-4670
Stewart, Robert K.	DOE-RL	Gen. Top. Meet. Chair	(509) 376-6192
Cline, Chuck	Ecology	Geohydrology	(206) 438-7556
Cross, Steve	Ecology		(206) 459-6675
Goldstein, Larry	Ecology	Unit Manager	(206) 438-7018
Hibbard, Richard	Ecology	CERCLA Unit Support	(206) 493-9367
Innis, Pamela	EPA	Unit Manager	(509) 376-5466
Sherwood, Doug	EPA	Unit Manager	(509) 376-9529
Kane, William F.	Parametrix	Ecology Support	(206) 455-2550
Mullen, Rich	Parametrix	Ecology Support	(206) 455-2550
Lacombe, Donna	PRC	EPA Contractor	(206) 624-2692
Knox, Kathy	SWEC	GSSC to DOE/RL	(509) 376-5011
Fassett, Doug	SWEC	GSSC to DOE/RL	(509) 376-3136
Fryer, Bill	SWEC	GSSC to DOE/RL	(509) 376-9707
McClung, Bill	SWEC	GSSC to DOE/RL	(509) 376-1853
Shigley, Diane	SWEC	GSSC to DOE/RL	(509) 376-5038
Jacobson, John H.	USACE	Project Manager	(509) 376-1250
Liias, Raimo	USACE	Env. Engineer	(509) 522-6924
Stewart, John	USACE	Project Manager	(509) 376-9101
Drost, Brian	USGS	EPA Support	(206) 593-6510
Staubitz, Ward	USGS	EPA Support	(206) 593-6510
Clark, Steve	WHC		(509) 376-1513
Downey, H.D.	WHC	Program Office	(509) 376-5539
Fassett, Jack	WHC	Geoscience	(509) 376-4224
Henckel, Robert P.	WHC	Env. Eng., OU Support	(509) 376-2091
Hopkins, Greg	WHC	Environmental	(509) 376-2625
Hoover, J.D.	WHC	Background	(509) 376-2668
Hulstrom, L.C.	WHC	RI Coordination	(509) 376-4034
Knepp, Tony	WHC	WHC	(509) 376-3398
Krug, Alan D.	WHC	OU Coordinator	(509) 376-5634
Lauterbach, Merl	WHC	Env. Engineer	(509) 376-5257
LeGore, Tim	WHC	Background	(509) 376-1225
Mix, Pauline	WHC	Activity Engineer	(509) 373-2902
Patterson, J.K.	WHC	Program Office	(509) 376-0568
Ruck, Fred	WHC	RCRA Closure Mgr.	(509) 376-9876
Smith, Ed	WHC	Reg. Analysis	(509) 376-0234

Attachment #4

Action Items Status List

General Topics Unit Managers Meeting
July 17, 1991

Item No.	Action/Source of Action	Status
GT.38	If possible, at the May Unit Managers Meeting a presentation on the approved, preferred alternative method for disposal of the reactors will be given. Action: Jim Goodenough (4/18/90, GT-UMM)	Open The EIS will be reviewed by Admiral Watkin's office and Nuclear Safety (4/16/91). The RL program at DOE/HQ has written a letter to EH urging EH to quickly approve the final EIS and allow it to be published (6/19/91). Waiting for action from headquarters (8/8/91).
GT.43	A follow-up meeting will be scheduled with EPA, Ecology, DOE and WHC to discuss the apparent conflicts between NEPA and RCRA/CERCLA activities. Action: Julie Erickson/Paul Dunigan (4/18/90, GT-UMM)	Open Headquarters is working on draft guidance for the EA and Phase III Feasibility Study to be incorporated into one document. Julie Erickson will set up a Omeeting when guidance has been received (10/16/90). Bob Stewart said it may be possible to incorporate any required aspects of NEPA into interim RODs for interim remedial measures (6/19/91). Examples of projects at other sites were sent to Julie Erickson. Doug Sherwood said the Council on Environmental Quality and EPA-HQ are working on it (7/17/91). Meeting to be held on 8/12/91 (8/8/91).
GT.68	A training plan on the Quality Assurance Requirements Document (QARD) will be developed and shared with the regulators for their review. Action: Ron Cote' (and H. Downey) (9/19/90 GT.UMM)	Closed The draft of the training plan was sent to the regulators for review (6/19/91). The document was provided (7/17/91).

GT.71	Provide the ENCORE project plan and copies of all deliverables to EPA and Ecology. Action: Nancy Werdel (10/16/90, GT.UMM)	Open The draft plan was completed and is in internal review (6/19/91).
GT.72	WHC will set up a meeting to coordinate RDDT&E supported and operable unit specific performance assessment (PA) activities, and assess the direction of the activities. Action: Jim Patterson (11/14/90)	Closed To be addressed by the risk assessment team (7/17/91).
GT.74	Provide the proposal to the regulators to improve comment/disposition resolution process on documents. Action: Bob Stewart, Tom Wintczak, John Stewart (11/14/90)	Closed (7/17/91) A draft proposal has been prepared. The document is in internal review and will be transmitted to the regulators when the review is complete (12/17/90). The intent of this item has been met, therefore a formal proposal will not be made (6/19/91).
GT.76A	DOE is to respond to the comments that were provided by Ecology and EPA on the revised EIIs 4.2 and 5.4. The EIIs are related to the handling of drilling decontamination fluids. Action: Bob Stewart (7/17/91)	Open. This action likely to be transferred to another individual (8/8/91).
GT.77	DOE is to prepare a proposal for the handling of existing drums of decontamination rinsate. Action: Hal Downey (11/14/90)	Closed Drums that contain material that has associated process knowledge may be dispositioned of without additional sampling. Drums that contain material that came from contaminated boreholes and drums that contain material that is not from contaminated areas will be sampled and disposed of accordingly (7/17/91).

GT.77A	A mechanism for the WHC to inform the regulators of sample results and disposal methods for rinsate is to be developed. Action: Hal Downey (7/17/91)	Open This action has been forwarded to Bob Hobbs, the manager in WHC resoponsible for the disposition of decontamination rinsate waters generated at durll sites. His organization obtains the sample data, submits it for designation, and subsequently diposes of the waste. Mr. Hobbs will contact Mr. Hibbard to discuss a method for sharing data with regard to waste designation (8/6/91).
GT.88	Provide a report at the February UMM on the application of the newly identified safety requirements to past practice activities. Specifically, address how the requirements will apply to approved RI/FS and IRA activities, and how existing and forthcoming work plans need to be revised. Action: T. Wintczak, M. Lauterbach, R. Carlson (1/23/91)	Closed The package of information has been sent to EPA and Ecology (7/17/91).
GT.91A	A presentation on data entry into HEIS is to be given at the *August* UMM. A meeting is to be set up between EPA, WHC, Ecology and DOE on how the determination is made to include certain data in HEIS and on what data validation entails. Action: Bob Henckel, Nancy Werdel (6/19/91)	Open The first round of the 1100 Area groundwater data is in HEIS. The entire groundwater database has been reviewed to ensure that all data is included. Data packages for the second and third round of 1100 groundwater data, the 300 FF-1 asparagus data and RCRA 200-BP-1 data are being prepared to be entered. Data entry is being evaluated to increase efficiency. Both items to be addressed at August UMM (8/13/91).

GT.95A	The draft task order on surveying and the associated schedule for performance and completion of the work are to be provided to EPA and Ecology. Action: John Stewart (6/19/91). *Mike Thompson will provide an update on the status of this task. Action: K.M. Thompson (7/17/91)*	Open The third or fourth draft of the Kaiser statement of work was received by the Corps the week of July 15. Comments on the document were provided to Kaiser by EPA. A list of wells to be surveyed was provided to the Corps on 2 August 1991. It will take *two to three* weeks for the Corps to provide a draft task order to DOE (7/17/91). WHC is providing to USACE a final version of task order this week. WHC will give a presentation at September UMM (8/8/91).
GT.101	Clarify the funding question for fiscal year (FY) '92 and '93 regarding the Expedited Response Actions. Action: Tom Wintczak (3/20/91).	Closed Funding in FY '92 and '93 is still being discussed at DOE-HQ. Doug Sherwood said having money was part of an acceptable change package, but not having money is not part of an acceptable change package (4/16/91). Tom Wintczak said that currently ERAs are to be funded under the Case 1, Prime scenario. This means $9.5 million will be available in FY 1992 and $9.5 million will be available in FY 1993 for ERAs. However, initial money has been requested (6/19/91).
GT.101A	The status of IRM/*ERA* funding will be provided at the August, 1991 UMM. Action: Tom Wintczak (6/19/91)	Open Funding levels for the Expedited Response Actions and IRM's for FY-92 remain at the 9.0 million dollar level. No additional funding has been identified at this time (8/6/91).

GT.104	A presentation on inter-program coordination between the Waste Management Division and the Environmental Restoration Division is to be given. Ecology requests that information on management decision making, data management, field work and cross-program communication between ERD and WMD be included. Specific examples include: 1) decontamination and decommissioning of the reactors; 2) surface radiation reduction; 3) RCRA-site activities; and, 4) reactor operations (mulberry trees). The objective is to assure the regulators that these activities are being conducted in accordance with federal and state law, the TPA and any ongoing or planned past practice work. Action: *Rick Wojtasek* (4/16/91)	Open Tom Wintczak will attempt to raise the action to a higher level of management (6/19/91). Bill Fryer will partially address this action as part of the operable until consistency task (7/17/91). This action has been elevated to T. B. Veneziano in the newly formed WHC Resource Planning and Program Integration organization for resolution. He has been requested to prepare a presentation for the September unit managers meeting (8/6/91).
GT.107	Representatives from DOE, EPA, Ecology and USACE are to identi fy responsible individuals to participate in a working group to resolve RCRA/CERCLA integration issues. Sue Price (WHC, 376-1653) should be informed of who the participants are. Action: Julie Erickson, Dan Duncan, Larry Goldstein and Raimo Liias (ACE) (6/19/91)	Closed (7/17/91) Julie Erickson chose Bob Stewart and Eric Goller to participate in the working group. Mr. Goller will be responsible for the non-SST closures (6/29/91).

GT.108	Protocols are to be developed to facilitate conduct of regulatory inspections and site visits at past practice sites. Action: Eric Goller (DOE) (6/19/91)	Open Casey Ruud is the contact for Ecology and Dan Duncan is the contact for EPA (7/17/91). Site entry protocol for regulatory personnel distributed within DOE-RL for review. Specific comments were requested on all organizational inpacts and implementation. A final version is anticipated to be complete September '91 (8/8/91).
GT.109	The surpassing of the turnaround times identified in the TPA for radiochemical sample analyses and the actions that will be taken to improve the turnaround times are to be provided to the regulators in a written document. Action: Joan Kessner (WHC) (7/19/91)	Open Joan Kessner said they are collecting data for existing labs and that a presentation is to be made at the September UMM (8/7/91).
GT.110	DOE, EPA, Ecology and ACE are to provide representatives to participate on the geophysical logging team. This team will set priorities for geophysical funding. Action: John Stewart (USACE), Larry Goldstein, Allan Harris (7/19/91)	Open Ward Staubitz was identified as the representative for EPA, Allan Harris was identified as the representative for DOE *and John Anderson was identified as the USACE representative* (7/19/91). Geophysics meeting held 8/8/91, with representatives from all agencies present (8/8/91). Chuck Cline and Krystyna Kawolik will represent Ecology (8/12/91).

5. One of the problems EPA and Ecology have observed with implementation of the environmental restoration program is the lack of direct oversight to planning and coordination of field activities, support services, and the budget. To date, it appears that each RI/FS project has its own schedule and management structure which is independent of other projects. The parties believe that better project coordination will enhance the ability to stay on schedule. This issue will become more complex as more projects are added to the system.

EPA and Ecology recently offered a possible solution to this problem -- that DOE create a "coordinator role", within DOE-RL Environmental Restoration Division. The goal was to ensure that all ER work required by the TPA would be accomplished in an efficient, coordinated manner. Functions such as assurance of consistency in preparation of primary documents, data compilation from a wide range of sources, coordination of activities to ensure available drill rigs, field equipment, specialized personnel, and laboratories were included in the discussion.

Although not incorporated as a milestone in the Agreement, DOE provided the following commitment to EPA and Ecology:

> "Enhanced management, coordination and planning of Environmental Restoration Program activities by DOE is recognized as an essential ingredient to successful accomplishment of the Program goals, TPA milestones and cleanup of the Hanford Site. To achieve a stronger focus on the effective implementation and coordination of field activities, support services, budget preparation, document preparation, and program management, DOE will augment its staff by assigning full time support contractor staff to enhance its oversight of the M&O and USACE assigned work.
>
> By June 1, 1991, DOE will take steps to enhance DOE's oversight of Environmental Restoration Program activities.
>
> By July 1, 1991, full implementation of the Task Order described above will be in effect."

EPA and Ecology see this as a positive step toward better coordination within DOE's Environmental Restoration program.

STONE & WEBSTER ENGINEERING CORPORATION PLAN FOR SERVICES UNDER CONTRACT DE-AC06-87RL11313		DATE: 06/28/91 REVISION: 0
TASK TITLE: Support of Program Oversight of Past Practice Activities, Environmental Restoration (ER) Program		DOE TASK NO: TS 3243 Supplement 1
SWEC TASK MANAGER: Bill Fryer	DOE MONITOR: Bob Stewart	SWEC J.O. NO: 01820.3243

DESCRIPTION OF SERVICES: (SCOPE, OBJECTIVES)

Support DOE-RL in enhanced management, coordination, and planning of Environmental Restoration Program activities. Specific support is to be provided for assisting DOE-RL personnel in the monitoring and oversight of the following M&O and USACE-managed activities: field activities, support services, budget preparation, document preparation, and program management.

DELIVERABLES:

1) Implementation plan for accomplishing integration/coordination task
2) Monthly status reports
3) Presentations to DOE-RL management and regulators as required

PLANNED ACTIVITIES & MILESTONES:

1) Working will all ER program elements (DOE-RL, contractors, regulators, etc.) develop specific implementation plans to accomplish enhanced program coordination/integration commitment agreed-to in Tri-Party Agreement Change Request negotiations. Milestones: Draft outline 08/01/91; Final plan 09/30/91.
2) Participate in weekly/monthly meetings with EPA/Ecology (Unit Manager meetings, others as appropriate) to develop "overall program knowledge."
3) Attend with/for DOE-RL appropriate M&O and USACE meetings on coordination/integration issues.
4) Support DOE-RL in overview of appropriate M&O/USACE coordination/integration tasks to ensure appropriate direction & identify integration issues.

ISSUES

WORK PLAN CONSISTENCY
- STANDARDIZED FORMAT AND WORK BREAKDOWN
- STANDARDIZED GEOLOGIC FRAMEWORK/STRATIGRAPHY
- USE OF SITE-WIDE BACKGROUND APPROACH
- RISK ASSESSMENT METHODOLOGY/APPLICATION
- CHARACTERIZATION STRATEGY/SAMPLING INTENSITY

RCRA/CERCLA INTEGRATION
- TSD'S WITHIN PAST PRACTICE OU'S
- IDW HANDLING
- EII'S, WRITTEN INTO PERMITS?

INTEGRATION OF THE AGGREGATE AREA MANAGEMENT STRATEGY AND THE RECENT CHANGES TO THE TPA INTO PROGRAMS AND ACTIVITIES
- IMPLEMENTATION DOCUMENTATION
- BIAS TOWARD ACTION: FOCUSING OF WORK PLANS
- PLANNING FOR REMEDIATION AND WASTE MANAGEMENT
- CLEANUP LEVELS VS RISK ASSESSMENT, REMEDIATING ONCE
- FOCUSED CHARACTERIZATION VS ALTERNATIVE REMEDIAL ACTIONS

D&D COORDINATION WITH REMEDIATION PLANNING AND ACTIVITIES

EII'S
- IDW
- FIELD SCREENING
- CONTINGENCIES FOR UNANTICIPATED CONDITIONS/CONTAMINANTS

STICKING POINTS IN PROGRAMS/ACTIVITIES
- PRIORITIES: DRILLING SERVICES
  LABORATORY SERVICES
- FIELD SCREENING/MOBILE LABORATORY CAPACITY

ERMAC TRANSITION

UPDATE ON EFFORTS TO IMPROVE CONSISTENCY OF WORK PLANS

M. R. ADAMS

ENVIRONMENTAL ENGINEERING GROUP

WESTINGHOUSE HANFORD COMPANY

UNIT MANAGERS MEETING

JULY 17, 1991

WHC CONTINUES TO RESPOND TO DOE AUDIT REGARDING WORK PLAN CONSISTENCY

- A "STANDARD" DOCUMENT DESCRIBING HANFORD GEOLOGY AND HYDROGEOLOGY HAS BEEN PREPARED; APPROVED FOR RELEASE BY RL

  TITLE: DELANEY, C. D., "GEOLOGY AND HYDROLOGY OF THE HANFORD SITE: A STANDARDIZED TEXT FOR USE IN WESTINGHOUSE HANFORD COMPANY DOCUMENTS AND REPORTS," WHC-SD-ER-TI-003, JULY 1991

- A DOCUMENT TO PROVIDE HANFORD SPECIFIC "GUIDANCE" IN CERTAIN KEY AREAS OF INCONSISTENCY HAS BEEN PREPARED

  - IN WHC REVIEW/READY FOR REVIEW BY RL END OF JULY
  - WAS PREPARED TO PROVIDE GUIDANCE FOR PHASE I RI

  TITLE: U.S. DEPARTMENT OF ENERGY, "COMPENDIUM OF GUIDANCE TO IMPROVE CONSISTENCY OF HANFORD FIELD INVESTIGATION WORK PLANS," DRAFT, DOE/RL-91-24, AUGUST 1991

RECENT CHANGES IN INVESTIGATION/CLEANUP STRATEGY IMPACTS UTILITY OF "GUIDANCE" DOCUMENT

- RECENT STRATEGY PROMULGATED BY DOE WOULD PLACE MORE EMPHASIS ON IRM APPROACH TO CLEANUP WITH EMPHASIS ON LIMITED FIELD INVESTIGATION (LFI) IF HISTORICAL (EXISTING) DATA NOT ADEQUATE

- SINCE GUIDANCE FOR SAMPLING BY MEDIA/SIZE TYPE WAS WRITTEN FOR RI PHASE I, UTILITY TO LFI MAY BE LIMITED:
  - EBASCO IN ADDRESSING THIS ISSUE
  - BECAUSE "MINIMUM NECESSARY" SAMPLING LEVELS DEFINED, MAY HAVE UTILITY TO LFIs

- OTHER AREAS OF DOCUMENTS STILL HAVE UTILITY
  - HISTORICAL RESOURCES
  - DRILLING/SAMPLING METHODS SELECTION
  - QA SAMPLES
  - PHYSICAL PROPERTIES
  - DETECTION LIMITS, ETC.

WHAT SHOULD WE DO WITH GUIDANCE DOCUMENT?

- DROP
- EDIT OUT SAMPLING GUIDANCE
- ISSUE FOR DOE REVIEW TO SEE IF UTILITY TO LFIs
- OTHER

RCRA/CERCLA INTEGRATION

JULY 17, 1991

FRED A. RUCK, III

OBJECTIVES

- INTEGRATION OF REMEDIATION ACTIVITIES OF RCRA AND CERCLA MANAGEMENT UNITS.
- ENSURE ACTIVITIES ARE CONDUCTED IN AN EFFECTIVE MANNER.
- DEVELOP TSD CLOSURE STRATEGIES THAT ARE CONSISTENT WITH THE OPERABLE UNIT CLOSURE STRATEGIES.

ISSUES

- COORDINATION OF SUBMITTAL OF WORK PLANS AND CLOSURE PLANS
- DEFERRAL OF REMEDIATION ACTIVITIES
- SAMPLING AND ANALYSIS INTEGRATION
- GROUNDWATER/VADOZE ZONE WELL INTEGRATION
- INVESTIGATIVE DERIVED WASTE
- SITE-WIDE BACKGROUND
- INCLUSION OF EII'S INTO RCRA PERMIT
- PERFORMANCE STANDARDS

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER

THE NECESSITY TO INTEGRATE RCRA AND CERCLA IS IDENTIFIED IN THE HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER:

- ARTICLE IV — STATUTORY COMPLIANCE AND RCRA/CERCLA INTEGRATION AND COORDINATION
- ARTICLE XXII — RCRA/CERCLA INTERFACE
- ARTICLE XXIV — PHYSICALLY INCONSISTENT ACTIONS
- SECTION 5.5 — TSD UNITS AND PAST PRACTICE UNITS INTERFACE

STATUS
RCRA/CERCLA INTEGRATION

- FIRST MEETING HELD JULY 12, 1991.
- METHOD TO RESOLVE ISSUES IDENTIFIED:
  - DEVELOP ISSUE PAPERS (SIMILAR TO SITE-WIDE PERMIT)
  - ISSUE PAPERS WILL BE USED TO DOCUMENT RESOLUTION
- ISSUES REQUIRING RESOLUTION IDENTIFIED.
- DECISION TO CONDUCT MONTHLY MEETINGS ESTABLISHED:
  - NEXT MEETING: AUGUST 7, 1991
SEATTLE, WASHINGTON

9 1 1 2 2 4 4 0 5 0 4

HANFORD SITE ENTRY PROTOCOL

FOR REGULATORY AGENCY PERSONNEL

Brad Erlandson

Westinghouse Hanford Company

July 17, 1991

Unit Managers' Meeting
General Topics Session

Hanford Site Entry Protocol Improves Regulatory Personnel's Access to Site

- Consistent with regulatory agency, DOE and contractor obligations
- Clearly communicates Hanford Site access requirements
- Provides for consistent implementation of access and inspection procedures

Protocol is Consistent with Applicable Statutes, Regulations and Agreements

- Provides regulatory agency personnel site access consistent with agency mandates

  - inspections, reviewing clean-up progress, verifying data

- Identifies radiation safety and occupational safety and health requirements

- Identifies DOE security requirements

- Identifies other areas requiring agreement in advance (e.g., sampling)

Protocol Clearly Communicates Hanford Site Access Requirements

- Radiological entry requirements (WHC-CM-4-10) (e.g., training, dosimetry, radiation work permits)
- Occupational Safety and Health Administration requirements (1910.120), including, medical surveillance and hazardous waste training
- Security requirements, including, badging, training, prohibited articles and document release
- Access requirements, including verification, equivalent for all contractors

Protocol Provides for Consistent Implementation of Access Procedures

- Access requirements are clearly communicated in advance
- Access requirements are the same regardless of contractor
- Routine points of contact are established for information exchange
- DOE and Contractor Resources are made available
- Allows site access programs to be proceduralized

Conclusion

Hanford Site Entry Protocol Will Provide Site Access That:

- **Is consistent with regulatory agency, DOE and contractor obligations**
- **Has clearly identified requirements**
- **Provides convenient but controlled access**

Management of Investigation of Derived Waste

Purpose of the EII 4.3

- Allows a flexible and cost effective management approach for investigation derived waste
- Allows containers to remain within a given operable unit in excess of 90 days
- Requires adherence to the substantive requirements of WAC 173-303-630
- Managed IDW in accordance with the final record of decision

Management of Investigation of Derived Waste

Status of EII and Strategy Document

- Comments from the regulators have been received and incorporated
- Revisions to the EII 4.3 have been agreed to with the exception of:
  - Management of personnel protective equipment
  - Time limits for transport of liquids to a covered facility
- Strategy document has been revised
- Strategy document will be signed by the tri-parties and will resemble the Hanford Site purgewater agreement

ANALYTICAL LABORATORY STATUS

Joan Kessner
July 17, 1991

WESTON

- Facility Assessment scheduled for 7/23-24.
- Will be invited back to Hanford Site in August.
- Improvement in turnaround of chemical data packages from Weston since 6/11 visit. Most data packages received within a few days of recovery schedule date; recovery schedule 80% complete.
  - -- First data from Teledyne received 7/16.
- Ecotech (Atlanta) assessment completed by WHC/Weston as proposed additional radchem subcontract.
- Evaluating acceptance criteria for rad samples.

DATACHEM

- Facility Assessment planned for first part of August.
- Turnaround of CLP packages good.
- Wet chemistry packages being resubmitted with appropriate QC information.

S-CUBED

- First results due end of July.

TMA

- First results due end of July.
- Evaluating acceptance criteria for rad samples.

222-S

- Expecting receipt of third EPA PE sample this week.
- No results from second EPA PE sample yet.
- Continuing to work on organic capability.

PNL

- Upgrading several rooms within the 325 facility.

SUMMARY OF DATA VALIDATION STATEMENTS OF WORK

WHC is developing statements of work for the validation of radiological and chemical analysis data based on CLP validation guidelines. The statements of work provide a strategy for data validation and reporting of data through the use of detailed requirements, checklists and example report formats. The statements of work specifically address the following key validation items:

- General technical and management requirements including personnel qualifications and records management,
- Requirements for the initial review of data packages to verify completeness and compliance with contract requirements,
- Detailed validation requirements that address critical data quality elements, method requirements and EPA guidelines during data validation,
- Requirements for checking for calculation and transcription errors. Calculation check frequency requirements will be specified at three levels; 20% for investigative data, 10% for remediation data and 100% for verification data,
- Requirements for documentation of validation activities and resolution of data discrepancies with the laboratories,
- Requirements for the review and comparison of field quality control data against statement of work and QAPjP requirements, and
- Requirements for the summary, qualification and reporting of validated data to data users in written and electronic formats.

Hanford Site
Data Validation Strategy

903 1248

Data Validation

- Validation - QA review of data against defined criteria to ensure the availability of data of sufficient quality and quantity for site decisions.
- Records Management
- Data Package Completeness
- Quality Assurance Review
  - Investigative Data (20% verification)
  - Remediation Data (10% verification)
  - Verification Data (100% verification)
- Validation Reports

Data Package Completeness

- Data reported as required by laboratory SOW
- Data package items inventoried by reviewer
- Discrepancies resolved by documented contacts with the laboratory

Records Management

- As received packages dated and duplicate records made of sample concentration reports
- Original data transmitted to WHC at completion of validation

Quality Assurance Review

Completion of checklist covering following items:

- Data Package Completeness
- Holding Times
- Calibrations
- Blanks
  - Field Blanks
  - Laboratory Blanks
- Accuracy
  - Surrogate Recovery
  - Matrix Spike Samples
  - Blind Spike Samples

Quality Assurance Review
(continued)

- Precision
  - Matrix Spike/Matrix Spike Duplicates
  - Duplicate Samples
  - Field Replicate Samples
  - Field Split Samples
- Compound Identification
- Quantitation Limits
- Reported Results

Validation Reports

Technical Memorandum summarizing following:

- Number of samples, analyses conducted and laboratory(s) involved
- Summary of data quality in terms of project DQO's and compliance with SOW
- Major Deficiencies (rejected data)
- Minor Deficiencies (qualified data)
- Attachments
  - As received laboratory data
  - Summary of data qualifications
  - As qualified laboratory data in written and electronic format
  - Data review checklists and supporting documentation

9 1 1 2 2 0 0 2 5

RISK ASSESSMENT METHODOLOGY STATUS

LM Bergmann
WHC Environmental Engineering
July 17, 1991

PURPOSE OF METHODOLOGY:

Consistently perform risk assessments at Hanford.

GOAL:

Produce a Hanford specific risk assessment guidance which is in compliance with current EPA and State requirements.

DRIVING FORCE:

Milestones M-29 identified in Hanford Past Practices Change Package.

MILESTONES

M-29-00:	DEVELOP AND SUBMIT DOCUMENTATION TO EPA AND ECOLOGY DESCRIBING HANFORD RISK ASSESSMENT METHODOLOGY.	MAR. 92
M-29-01:	IDENTIFY AND SUBMIT DESCRIPTIONS OF CODES AND MODELS TO BE USED IN RISK ASSESSMENT.	SEPT. 91
M-29-02:	SUBMIT A PLAN FOR THE DEVELOPMENT OF AREA WIDE GROUNDWATER MODELS TO SUPPORT RISK ASSESSMENT AND TO EVALUATE IMPACTS OF CHANGING GROUNDWATER FLOW FIELDS.	DEC. 91
M-29-03:	SUBMIT RISK ASSESSMENT METHODOLOGY DOCUMENT (PRIMARY DOCUMENT) AND INCLUDE DOCUMENT IN APPENDIX F.	MAR. 92

■ESTABLISHED TWO COMMITTEES

-Risk Assessment Committee:

A working team to come to an agreement on the risk assessment methodology for Hanford (in support of M-29-00).

-Modeling Committee:

A working team to come to an agreement on the models and codes to be used in the Hanford risk assessments (in support of M-29-01).

■STATUS

-Kickoff meeting was held June 6, 1991

Both committees met together and established basic ground rules, goals and schedules.

-Risk Assessment and Modeling Committees are meeting approximately every two weeks through August.

-Risk Assessment Agenda

- ✓ ● Exposure Assessment
- ✓ ● Toxicity Assessment
- ● Contamination Identification
- ● Risk Characterization
- ● Ecological Risk Assessment
- ● Qualitative Risk Assessment

■APPROACH SUMMARY:

- OBJECTIVES

  - Short Term:

    Determine the action levels at specific waste sites (e.g. Establish target risk based clean-up levels). More uncertainty - Less data.

  - Long Term:

    Determine cumulative risk at a site after remedial actions have occurred. Less uncertainty - More Data

- Use the current risk assessment guidance, but write a specific instructions for Hanford - eliminating ambiguity.

■ APPROACH SUMMARY (CONT.)

- Methodology will be standard for application to various clean-up strategies (e.g. macro-engineering) and long and short term goals.

- Methodology will be applicable to the following land-uses:

  - Residential
  - Agricultural
  - Recreational
  - Industrial

- Building a black box which risk assessors can input concentrations and get a risk as an output.

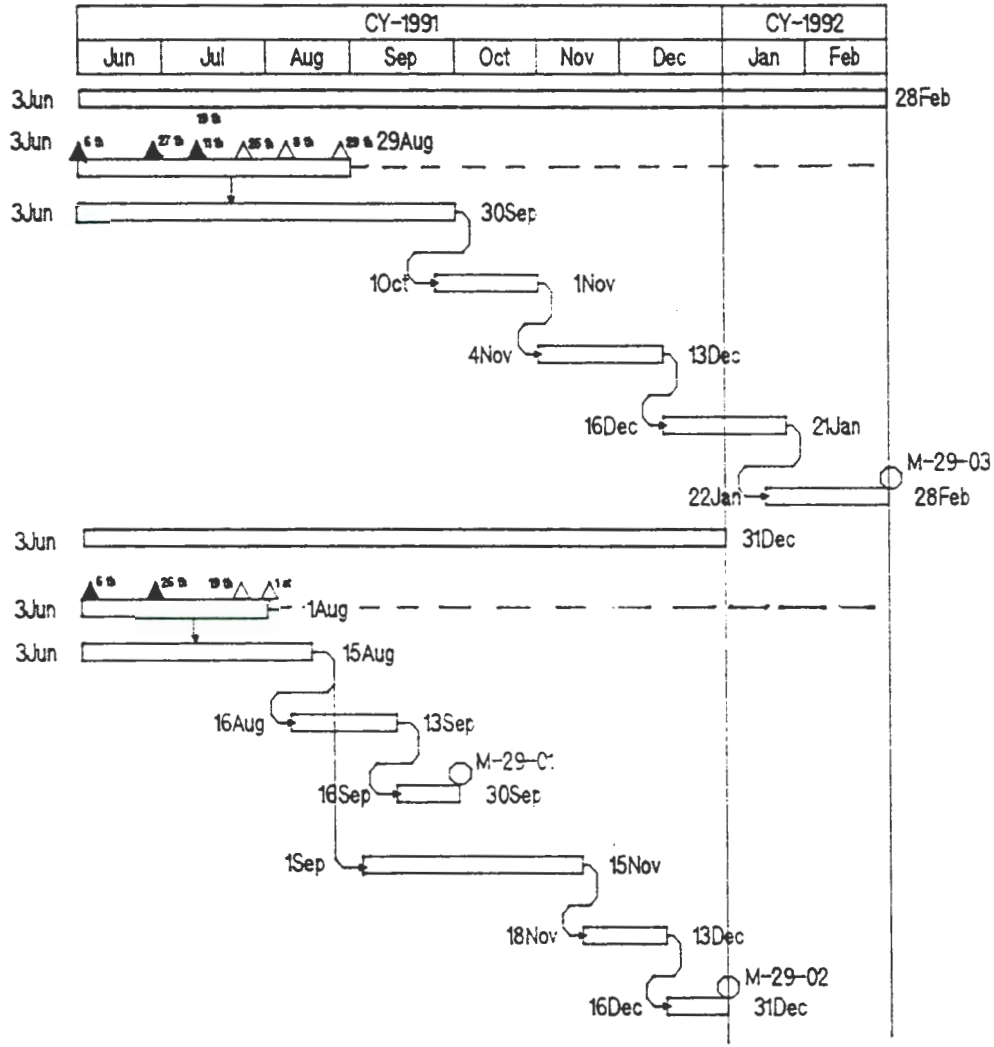
■APPROACH SUMMARY (CONT.)

- Methodology will be written to individuals with experience in risk assessment.

- The methodology will be a living document-will need periodically reviewed.

- Further status and presentation to Unit Managers for the October meeting.

RISK ASSESSMENT METHODOLOGY



Project:	LBRAM	Date: 15 Jul 91	07:38
RISK ASSESSMENT METHODOLOGY			
Page: 1 OF 1	Drawn by	STEVE J. SAKEY	6-3092

9 1 1 2 2 4 4 0 5 3 4

STATUS OF THE HANFORD BOREHOLE LOGGING PROGRAM AND COMMENTS ON GEOPHYSICS

STATUS OF THE SPECTRAL-GAMMA LOGGING SYSTEM

- THE HPGe SENSOR IS FULLY FUNCTIONAL AND WE ARE USING IT ON AN ON-CALL BASIS.

- IT HAS LOGGED THE RECENTLY DRILLED GROUNDWATER WELLS IN 200-BP-1, AND IT WILL BE LOGGING THE 200-BP-1 IN-CRIB BOREHOLE EARLY NEXT WEEK.

- BOTH THE PNL GROSS-GAMMA TOOL AND THE WHC SPECTRAL-GAMMA TOOL ARE BEING RUN IN SELECTED BOREHOLES TO BUILD A BASE FOR CORRELATING EXISTING GROSS-GAMMA LOGS WITH SPECTRAL-GAMMA LOGS.

- WE WILL SOON BEGIN LOGGING FOR VADOSE ZONE MONITORING OF THE INACTIVE CRIBS.

- THE SECOND TOOL IS ON ORDER. SHIELDING IS INCORPORATED.

- INSTALLATION OF THE BOREHOLE CALIBRATION MODELS IS AWAITING FUNDS.

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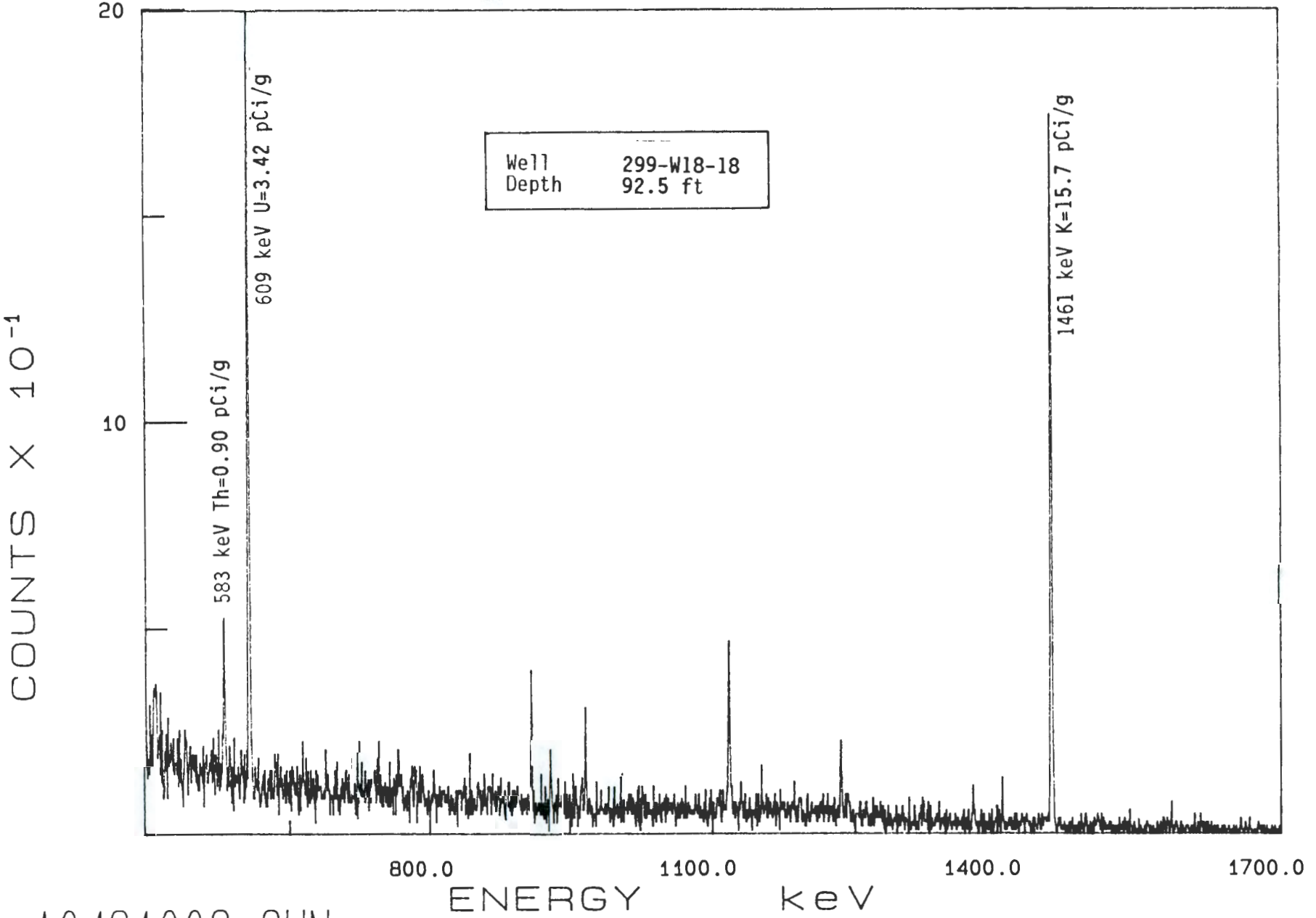

A0481008.CHN SAMPLE: Well 299-W18-18 Depth 92.5 ft
RLS HPGe-18% K=15.7 U=3.4 Th=0.9 pCi/g

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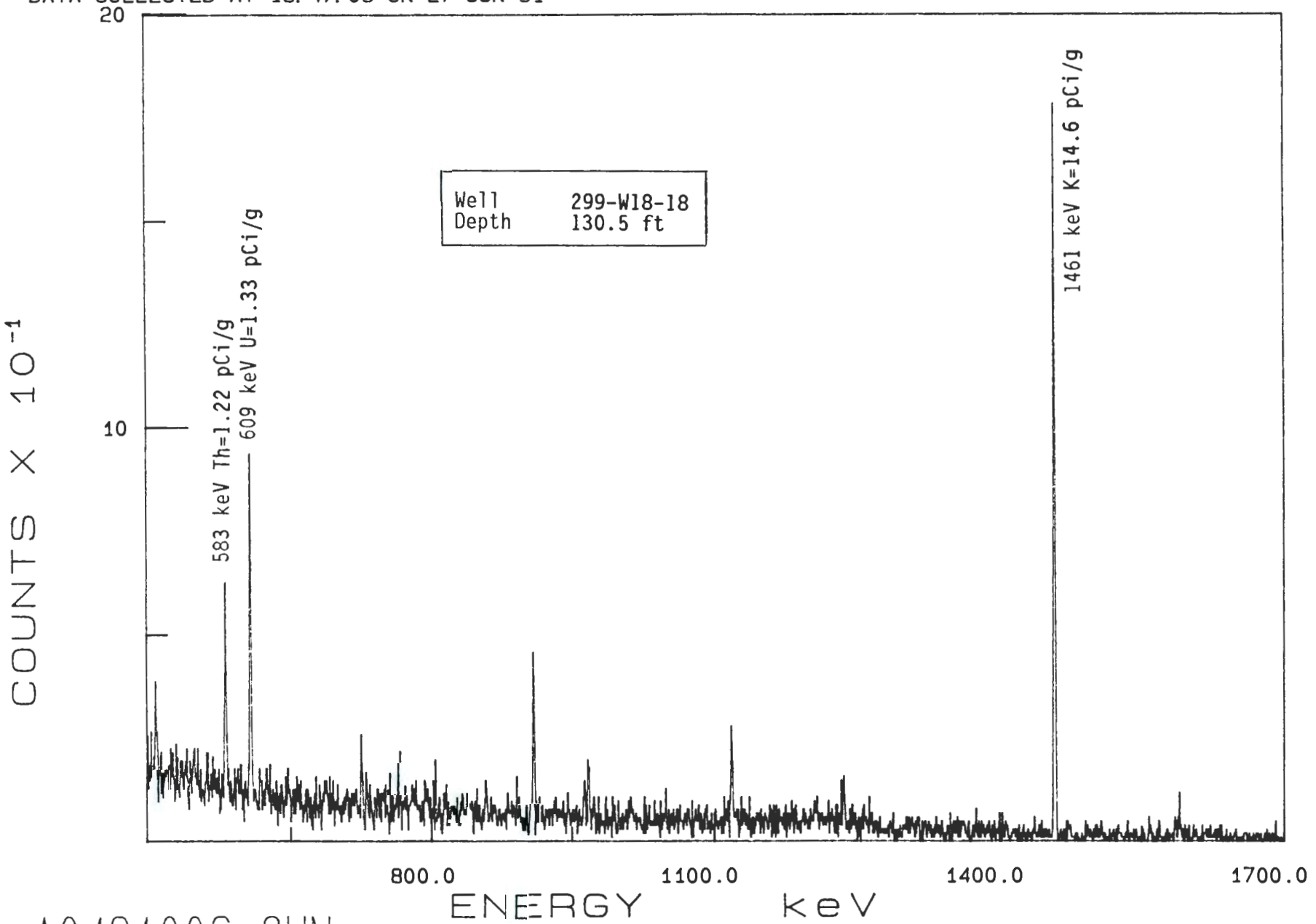

A0481006.CHN SAMPLE: Well 299-W18-18 Depth 130.5 ft
RLS HPGe-18% K=14.6 U=1.33 Th=1.22 pCi/g

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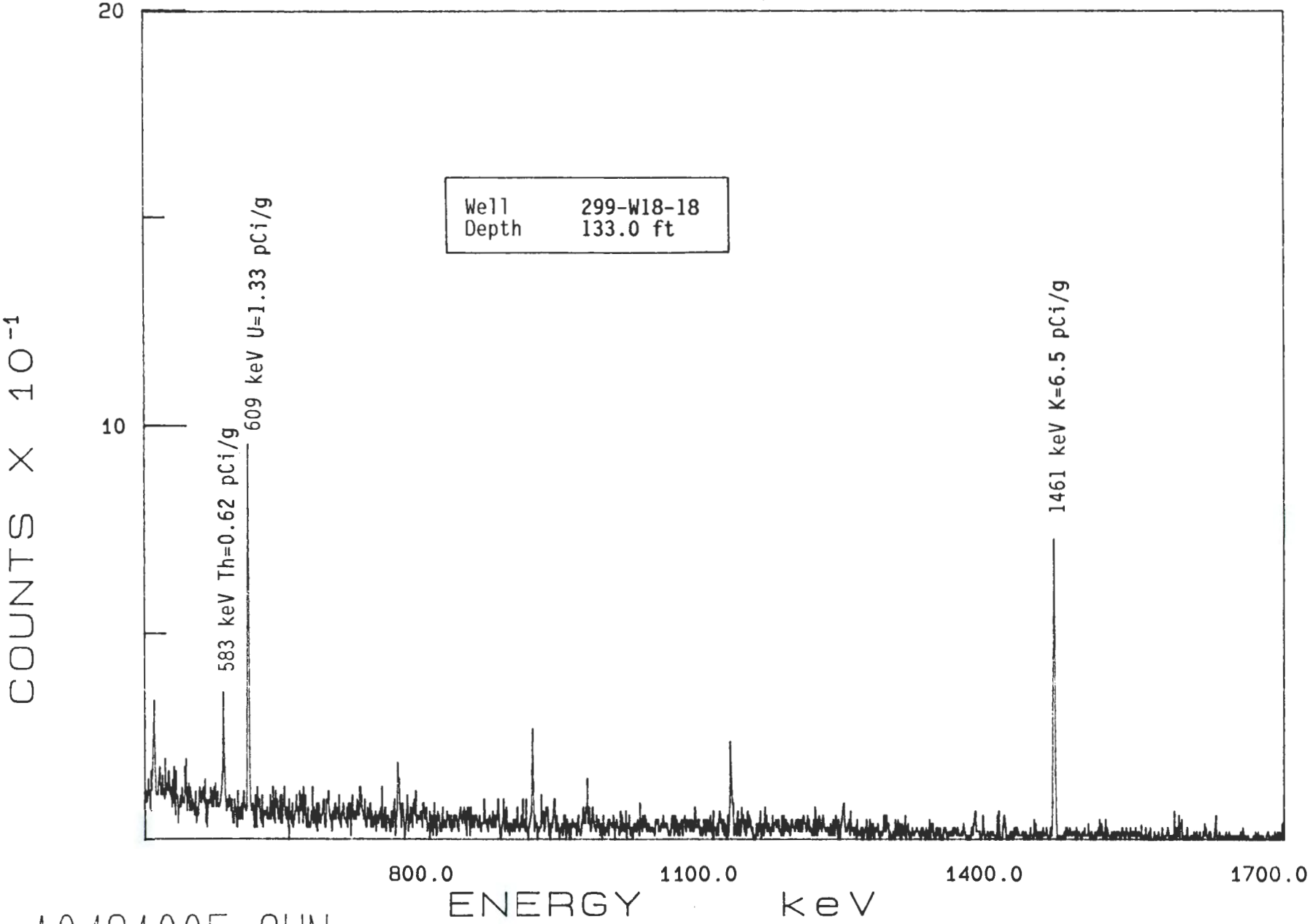
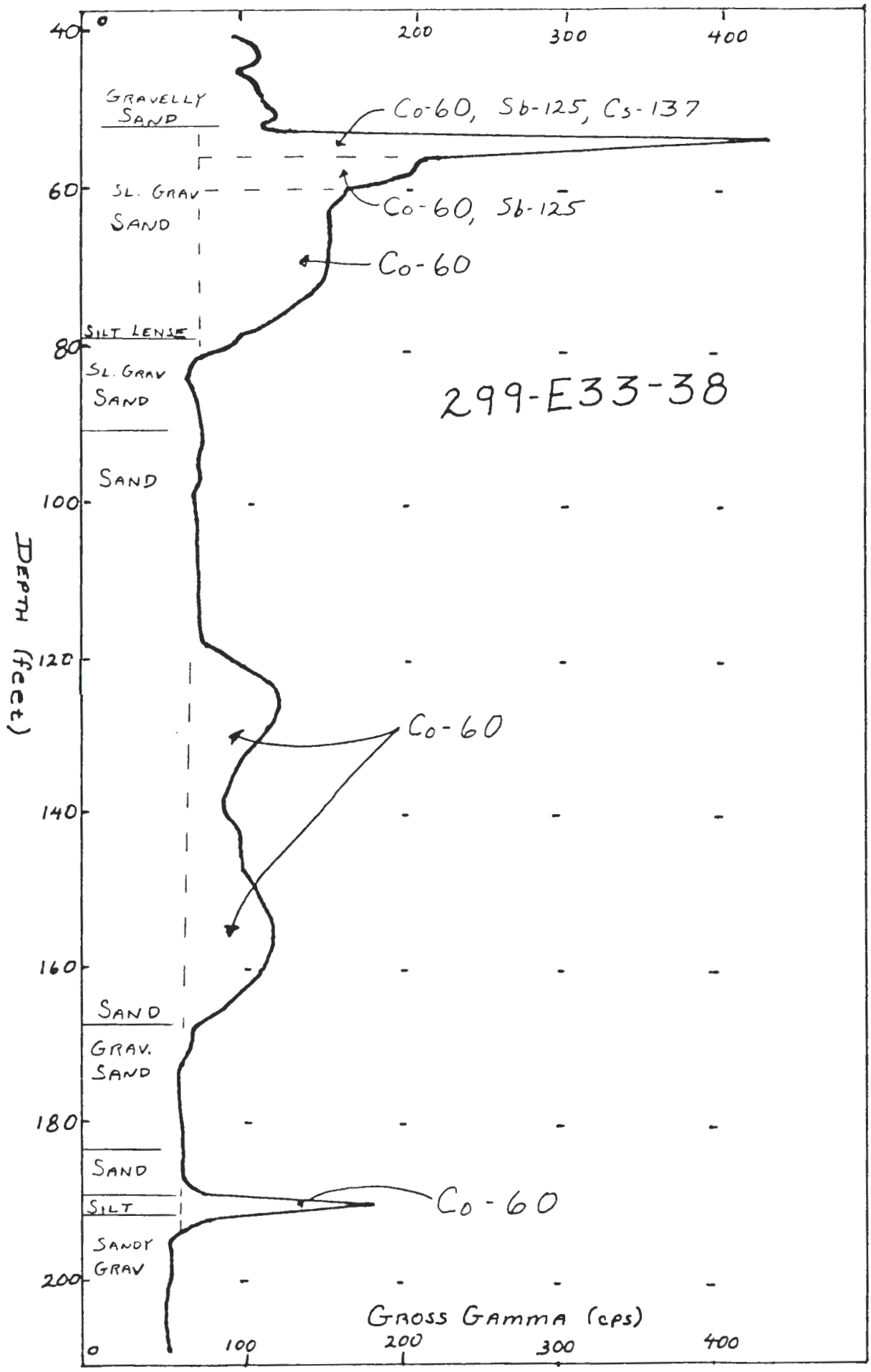


A0481005.CHN SAMPLE: Well 299-W18-18 Depth 133.0 ft
RLS HPGe-18% K=6.5 U=1.33 Th=0.62 pCi/g


GRAVELLY SAND
SL. GRAV SAND
SILT LENSE
SL. GRAV SAND
SAND
SAND
GRAV. SAND
SAND
SILT
SANDY GRAV
Co-60, Sb-125, Cs-137
Co-60, Sb-125
Co-60
Co-60
Co-60
299-E33-38
DEPTH (feet)
GROSS GAMMA (cps)
0
100
200
300
400
40
60
80
100
120
140
160
180
200

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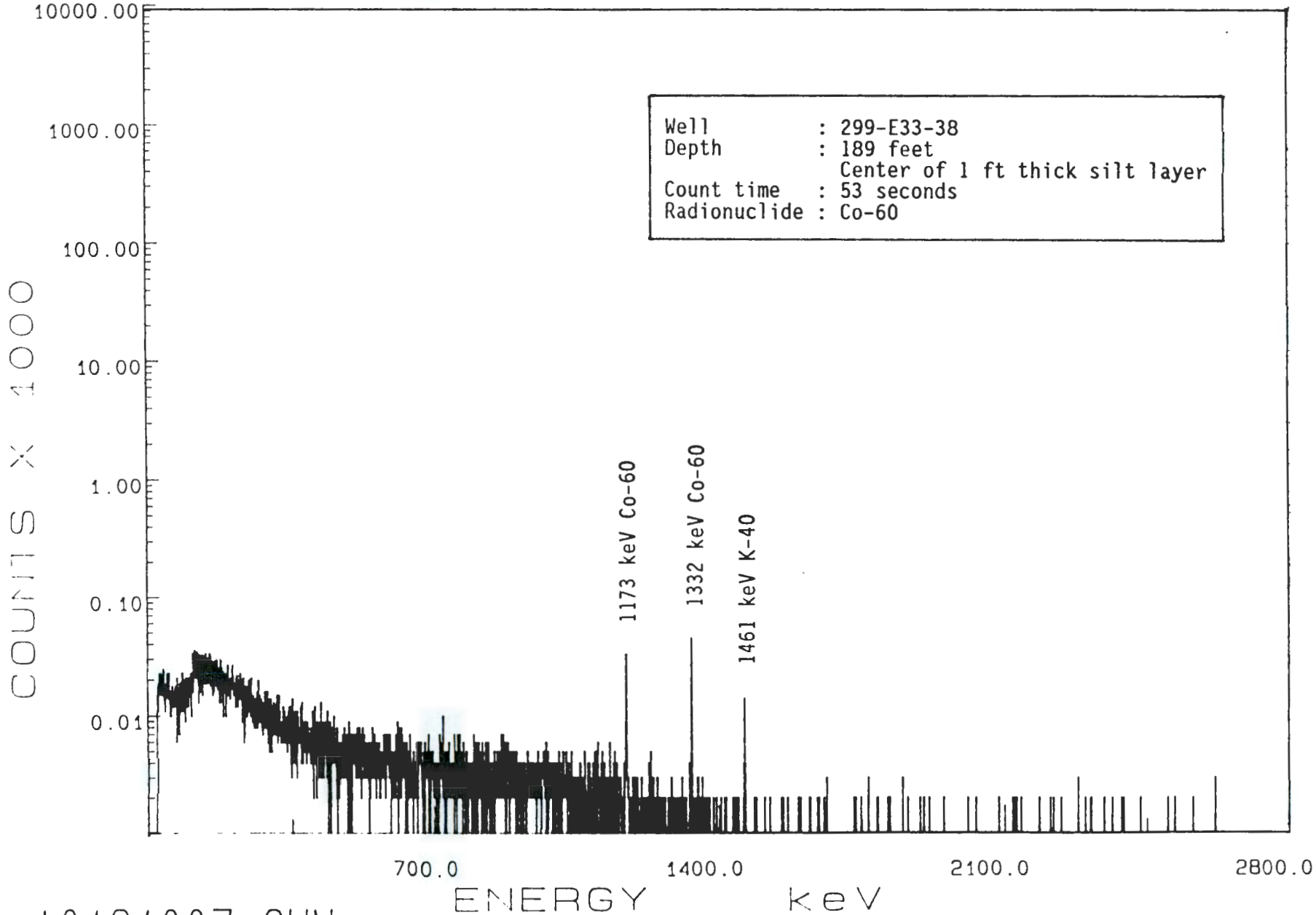
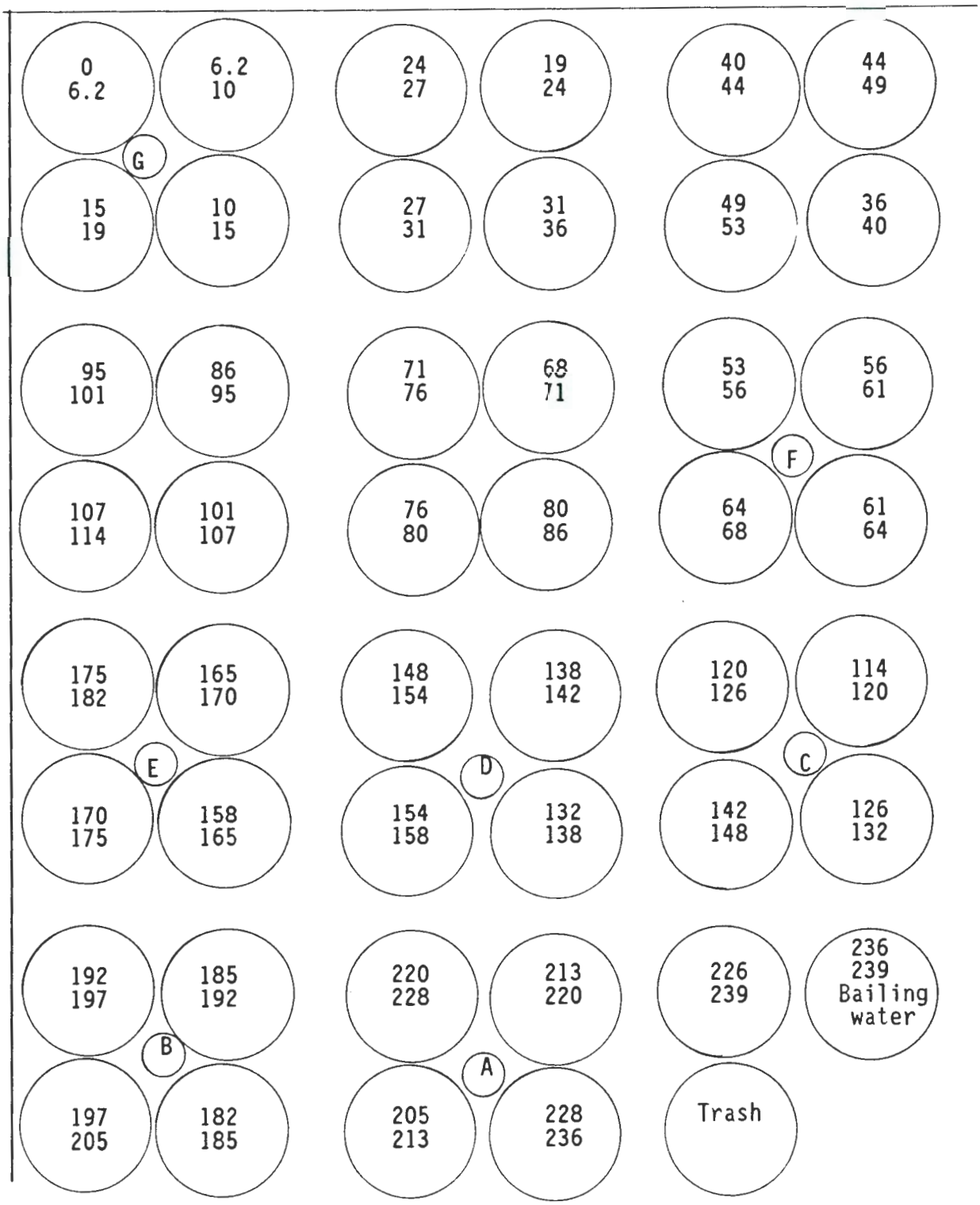


A0131007.CHN SAMPLE: Well 299-E33-38 Depth 189 ft
RLS HPGe-18%

DRILL CUTTINGS WASTE DRUMS STORAGE

200-BP-1 Well 299-E33-38
Numbers Indicate Depth Range

NORTH --->



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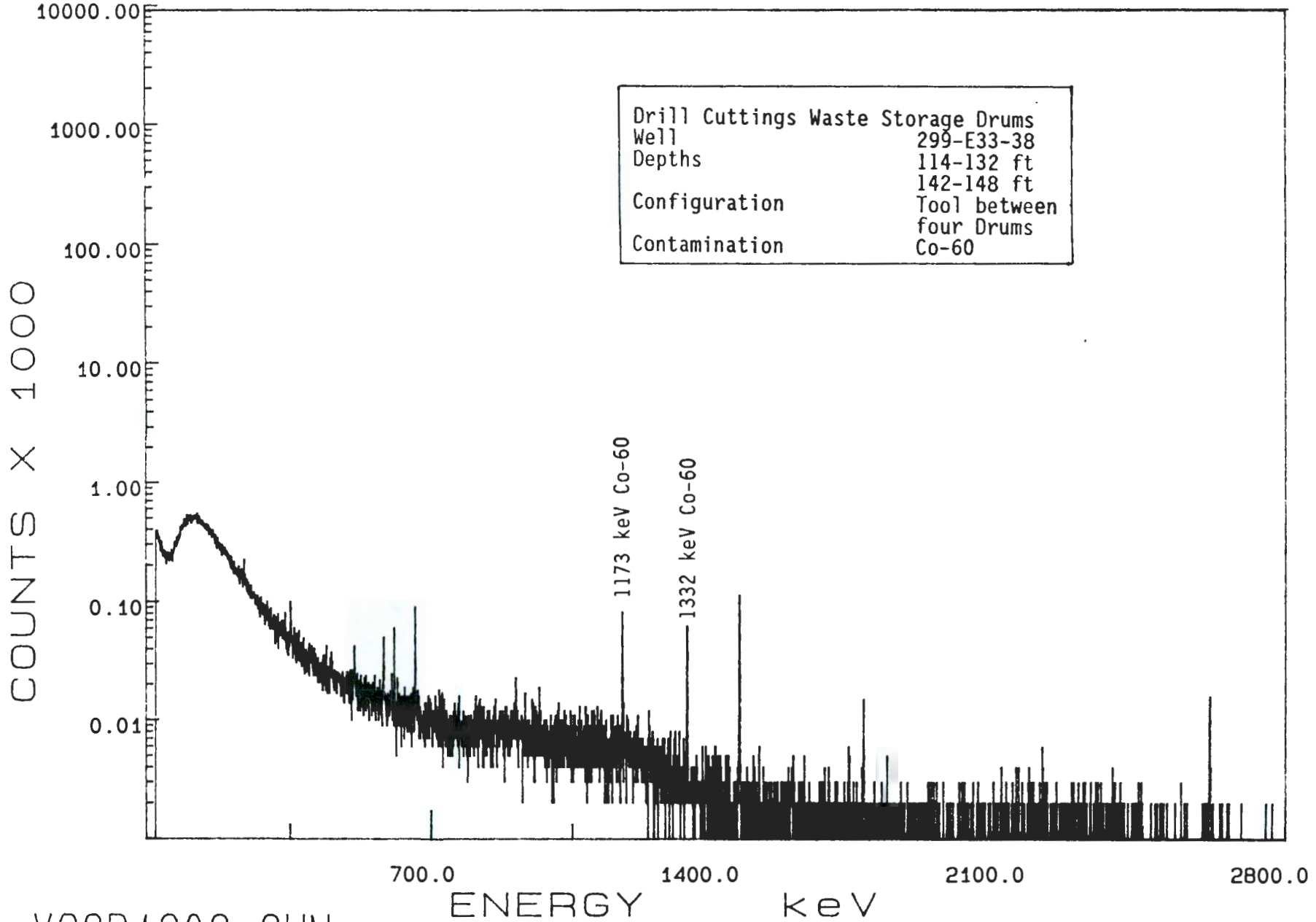

X38D120C.CHN SAMPLE: DRILL CUTTINGS E33-38 DEPTH 114-148 FT
RLS HPGe-18% Borehole Detector system

TYPE = -1 MCA # 01 SEGMENT # 01 SEQUENCE # 0
REALTIME = 301.56 SECONDS, LIVETIME = 300.00 SECONDS
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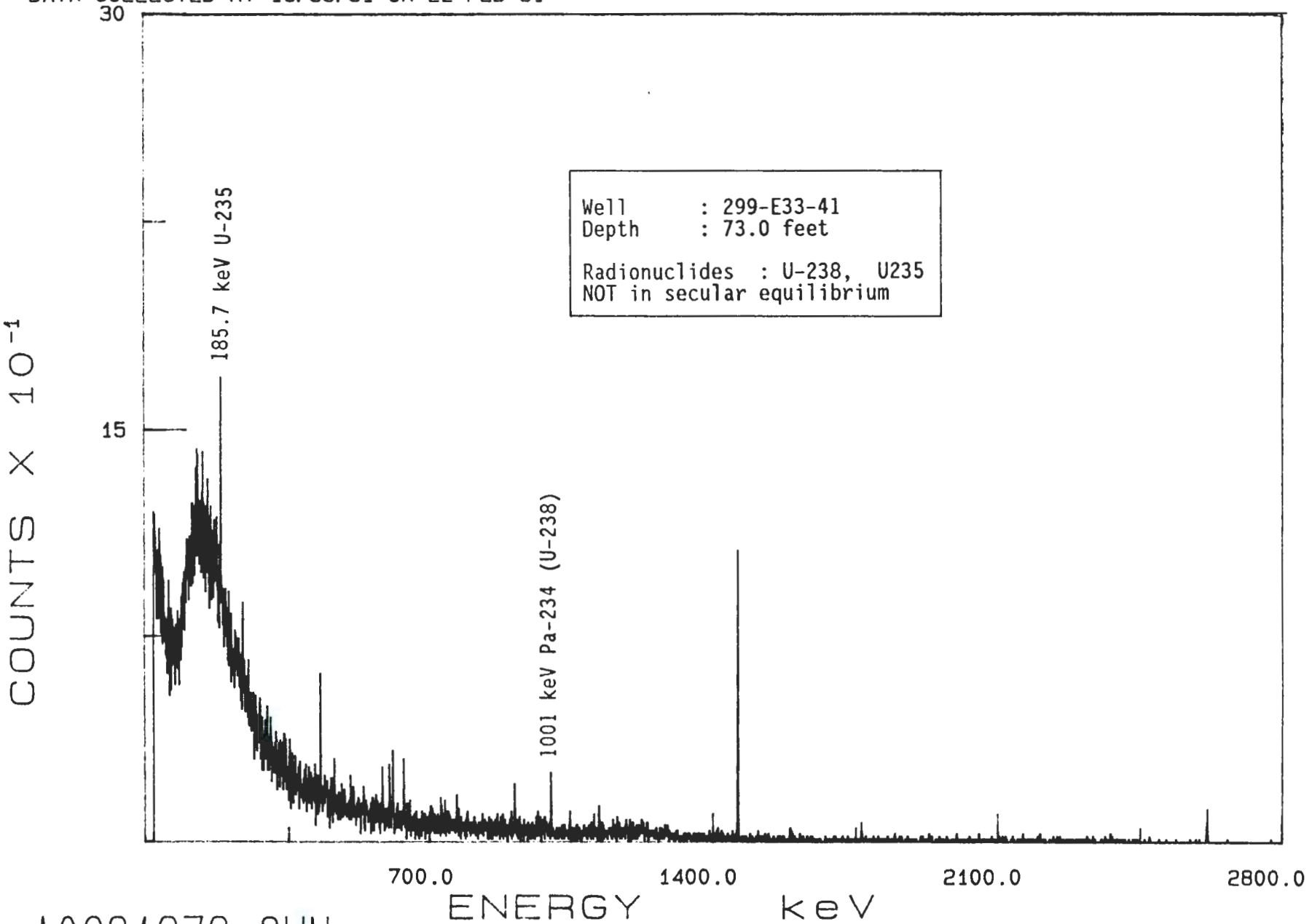

A0281373.CHN SAMPLE: Contamination; seen by HPT and verified by RLS Depth 73 ft
RLS HPGe-18% RCRA Well 299-E33-41

TYPE = -1 MCA # 01 SEGMENT # 01 SEQUENCE # 0
REALTIME = 314.88 SECONDS, LIVETIME = 300.00 SECONDS
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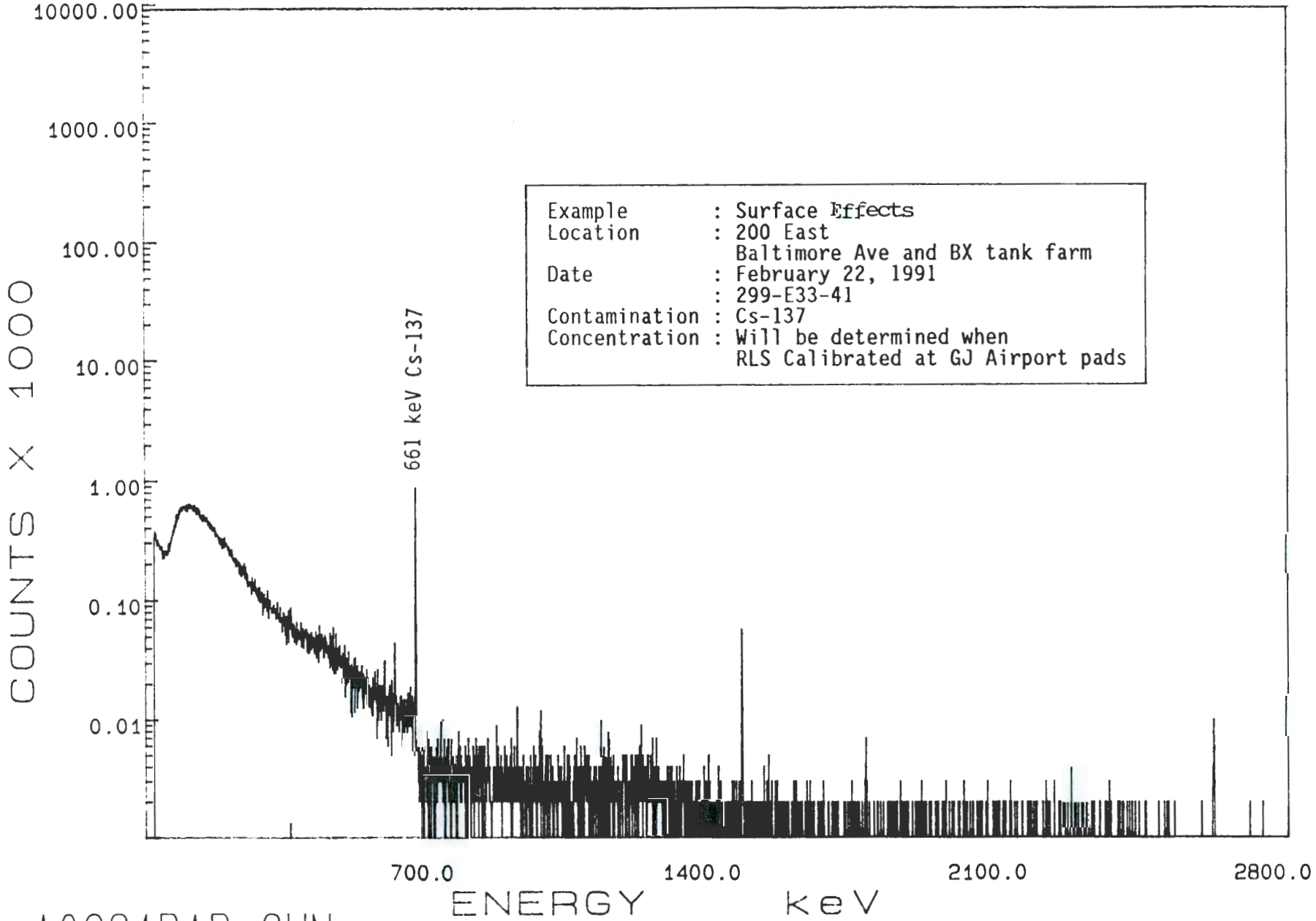
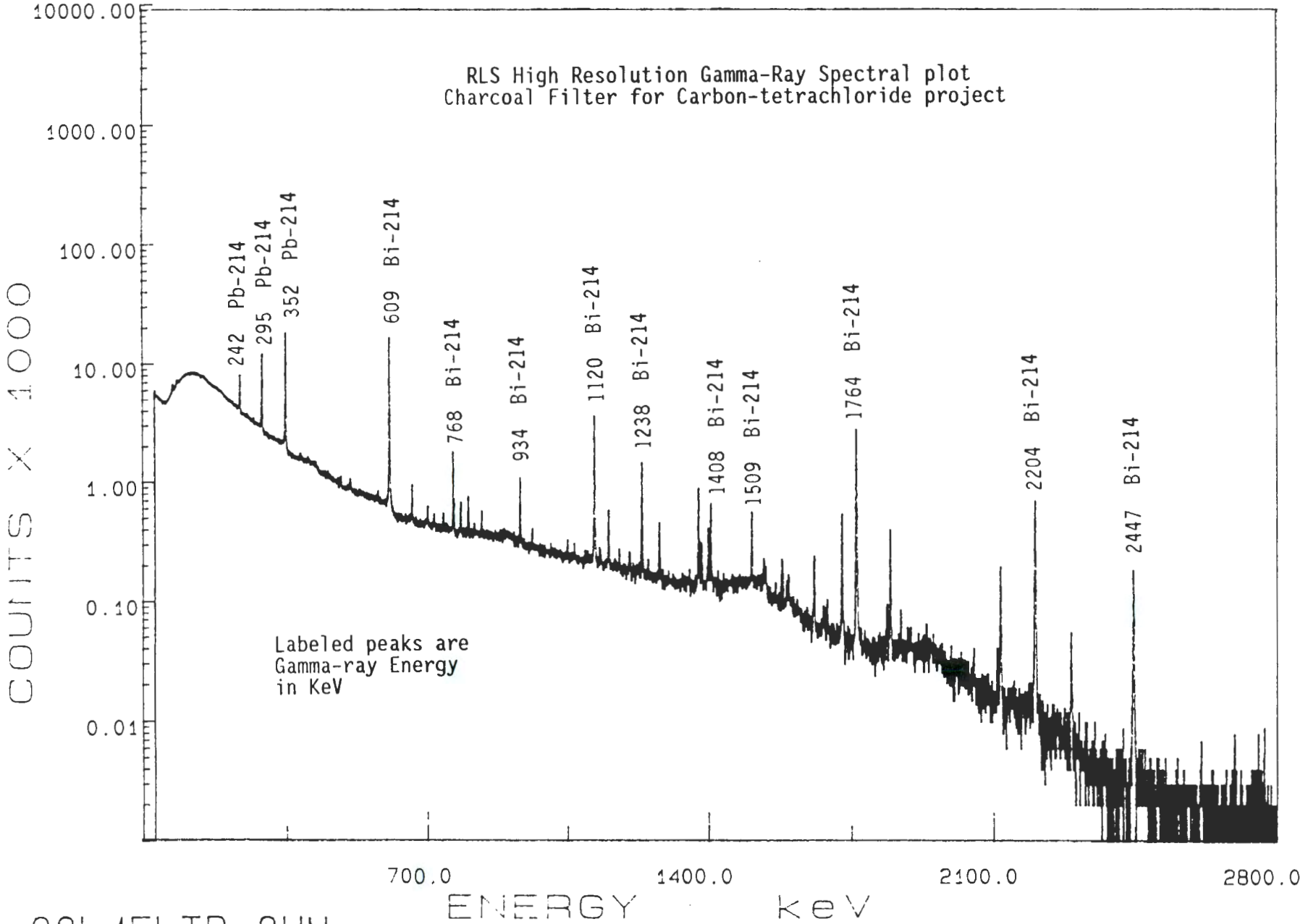


A0281BAB.CHN SAMPLE: Background at 24" above GL; between Baltimore St & Excl fence
RLS HPGe-18% RCRA Well 299-E33-41

TYPE = -1 MCA # 01 SEGMENT # 01 SEQUENCE # 0
REALTIME = 405.70 SECONDS, LIVETIME = 300.00 SECONDS
DATA COLLECTED AT 14:00:13 ON 16-APR-91



CCL4FLTR.CHN SAMPLE: CHARCOAL FILTER #1, MAX GAMMA ACTIVITY, 16APR91 14:30
200W Z-1A crib Carbon-tetrachloride vapor extraction project

RECOMMENDATIONS FOR THE NEUTRON MOISTURE-DETECTION AND THE NEUTRON ACTIVATION TOOL DEVELOPMENT.

- IN DISCUSSIONS WITH SERVICE COMPANY RESEARCH PERSONNEL, IT BECAME APPARENT THAT THEY DOUBTED THE VALIDITY OF ANY DATA THAT THEY COULD COLLECT IN HANFORD BOREHOLES AT PRESENT.

- THE SPECIFICATION FOR A NEUTRON-MOISTURE-MEASUREMENT MODELLING CONTRACT ARE BEING PREPARED.

- A SEARCH IS ON TO BRING AN APPROPRIATE PERSON IN-HOUSE TO CARRY OUT NUCLEAR TRANSPORT MODELLING STUDIES FOR NEUTRON-ACTIVATION WORK. WE HAVE THE COMPUTER, THE EXPERTISE, AND THE LOS ALAMOS-DEVELOPED SOFTWARE TO DO THIS.

PAIRED BOREHOLES TO DO DEFINITIVE LITHOLOGIC CORRELATION/TESTING FOR INDUSTRY TOOLS AS WELL AS OUR SPECTRAL-GAMMA TOOL

- DUE TO PERSONNEL LIMITATIONS, PROGRESS ON THIS HAS BEEN MINIMAL. HOWEVER, AS WE BEGIN THE CRIB-AREA VADOSE ZONE CHARACTERIZATION/MONITORING WE WILL INVESTIGATE SOIL TYPES AND WELL LOCATIONS THAT WOULD BE SUITABLE FOR THIS TESTING.

- TESTING AND, IF POSSIBLE, CALIBRATION OF INDUSTRY NUCLEAR TOOLS CAN BE CARRIED OUT AT THE PAIRED BOREHOLES.

GEOPHYSICS AT HANFORD AS A TEAM EFFORT -- BOREHOLE AND SURFACE

- WE HAVE FORMED A COMMITTEE TO REVIEW AND SUPERVISE GEOPHYSICS SITE WIDE TO ASSURE CONSISTENCY OF THE WORK PERFORMED ON THE SITE.

- THE COMMITTEE WILL STRESS WRITING AND REVIEW OF WORK PLANS TO ASSURE CONSISTENT USE OF COST-EFFECTIVE, REMOTE SENSING (I.E., GEOPHYSICS) CHARACTERIZATION METHODS

- THE COMMITTEE WILL SUGGEST AND INVESTIGATE NEW TECHNIQUES

INNOVATIVE TECHNIQUES

- WE WILL SEARCH OUT TECHNIQUES TO BE USED IN NEW AND INNOVATIVE WAYS HERE AT HANFORD.
  - ENGINEERS ARE TRYING TO TRACE UNDER-GROUND PIPING WITH IMPINGED ACOUSTICAL SIGNALS
  - TIME-DOMAIN ELECTRO-MAGNETIC (TDEM) METHODS NEED TO BE TESTED TO DETERMINE IF THE RESOLUTION WILL SATISFY CHARACTERIZATION NEEDS AT HANFORD
  - ELECTRICAL AND ACOUSTIC CROSS-HOLE TOMOGRAPHY
  - VERTICAL SEISMIC PROFILING (VSP)
  - MEASUREMENTS WHILE DRILLING (MWD)
- THE COMMITTEE CHAIRMAN IS GOING TO THE DOE, OFFICE OF TECHNOLOGY DEVELOPMENT "PROPOSAL REVIEW" NEXT WEEK AND WILL EVALUATE SUBSURFACE IMAGING PROPOSALS.

WORK PLANS

- ALL INTRUSIVE WORK SCOPE FOR 100 AREA WORK PLANS HAS BEEN RESCOPED
- ALL OUTSTANDING WORK PLAN COMMENTS, EXCEPT 100 NR AND 100-DR-1, HAVE BEEN DISCUSSED FOR AGREED TO DISPOSITIONS
- WORK PLAN FORMAT HAS BEEN NEGOTIATED
- N AREA Ous HAVE BEEN REDEFINED TO FORM A SOURCE OU (NR-1) AND A GROUNDWATER OU (NR-2)
- FR-3 HAS BEEN ADDED TO THE F AREA AS A GROUNDWATER OU
- INTEGRATION OF TSD UNITS INTO THE PAST PRACTICE STRATEGY HAS BEEN AGREED TO
- REWRITING OF THE FIRST FIVE 100 AREA WORK PLANS WILL BE INITIATED THIS WEEK

OTHER ITEMS

- DRAFT HANFORD PAST PRACTICE INVESTIGATION STRATEGY WAS SUBMITTED FOR REVIEW ON 6/30/91
- RISK ASSESSMENT/MODELING TEAMS ARE MEETING ON SCHEDULE
- 100 AREA INTEGRATED SCHEDULE INITIATED ON 7/16/91
- THREE 100 AREA FEASIBILITY STUDIES WERE INITIATED ON 7/16/91

ISSUES

- SPECIFIC DRILLING LOCATIONS FOR 100-FR-3 MUST BE IDENTIFIED FOR REGULATOR APPROVAL
- 100 AREA FEASIBILITY STUDIES PROJECT PLAN SHOULD BE REVIEWED AND AGREED TO BY THE PARTIES
- NEED TO IDENTIFY REGULATOR INVOLVEMENT ON THE 100 AREA INTEGRATED SCHEDULE
- M-30-00 MILESTONE MUST BE REVIEWED FOR INTEGRATION INTO THE WORK PLANS
- REGIONAL WORK SCOPE (BIOTIC, CULTURAL RESOURCE REVIEW, ETC.) SHOULD BE PRESENTED AND REVIEWED

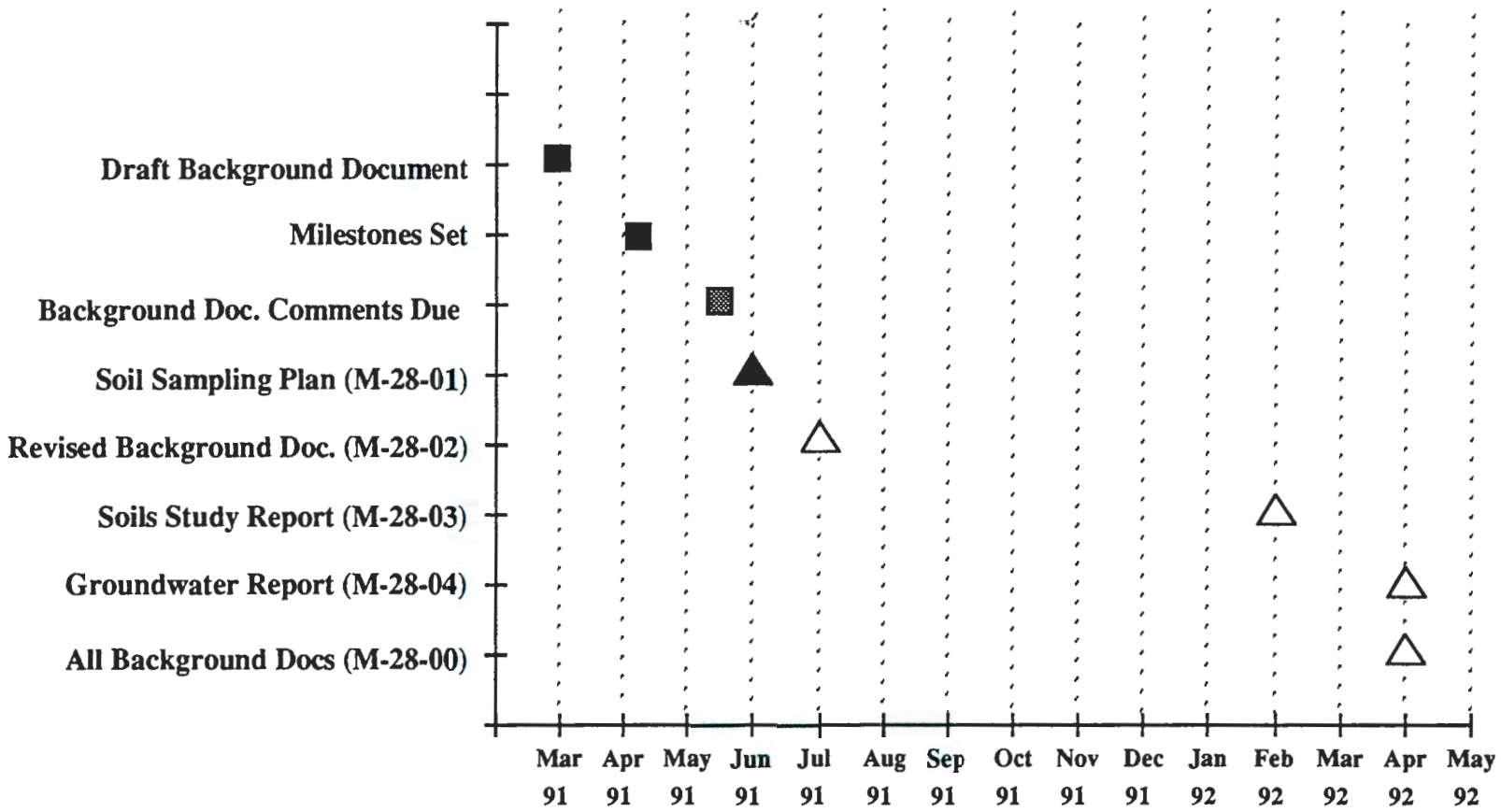
SITE-WIDE BACKGROUND STUDIES:

UPDATE

July 1991

- MILESTONES
- SOIL BACKGROUND STATUS
- GROUNDWATER BACKGROUND STATUS

Hanford Site Soil & Groundwater Background Milestones



ACTIVITY	MILESTONE	STATUS
• Soil Background Sampling/Analysis Plan	June 91	met
• Background Document	July 91	On schedule* Revisions to Background document completed; Review comment addressed * Based on comments received to-date
• Soil background report;	Feb. 92	Contingent on initiation date of soil sampling, turnaround time for analytical results
• Groundwater Background Data Compilation, Evaluation, Summary	Apr. 92	on schedule

SOIL BACKGROUND STATUS

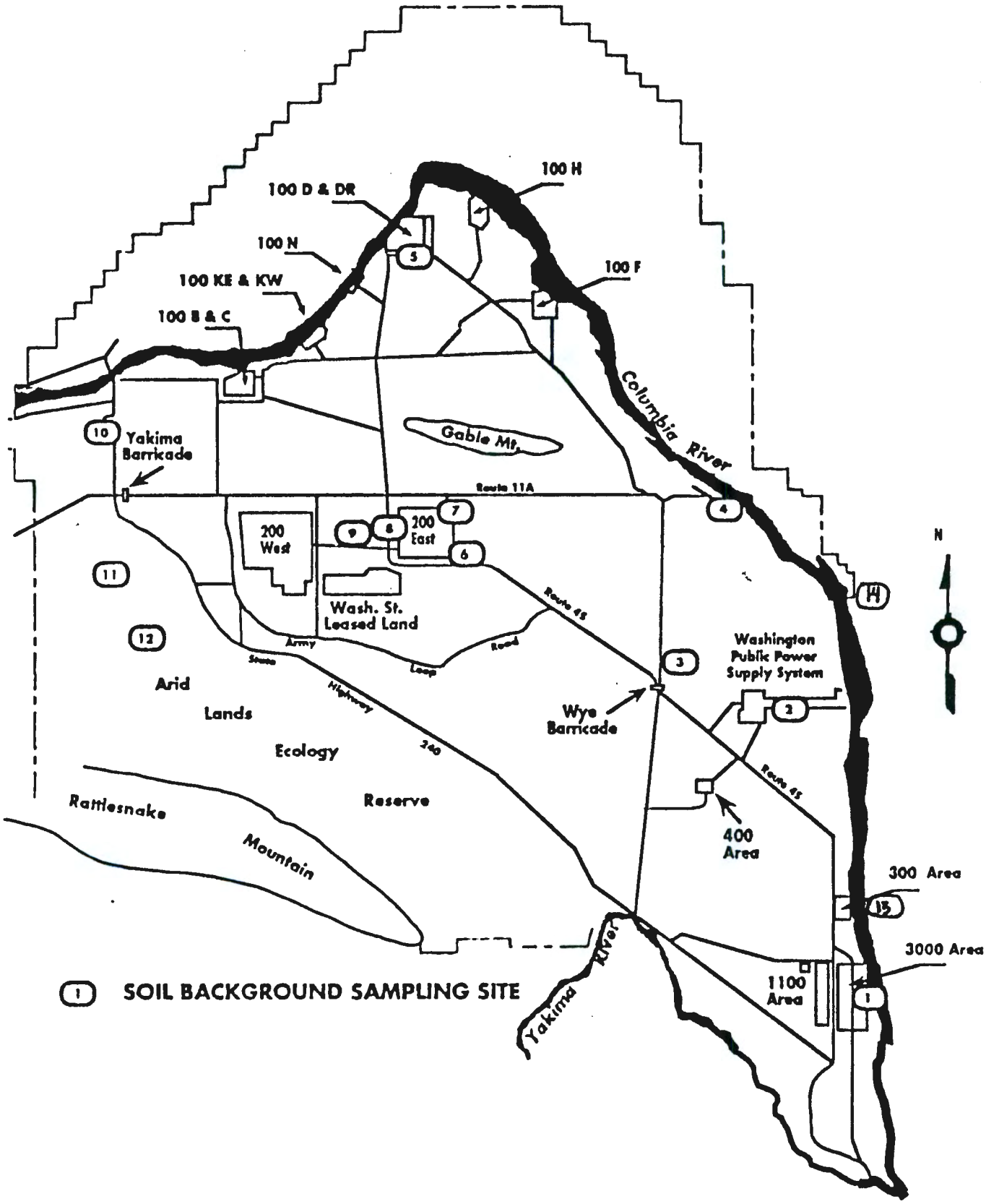
- Sampling/Analysis Plan Completed

  12 Candidate on-Site soil sampling localities (≈ 70 random; 70 judgment)
  2 Candidate off-Site soil sampling localities (≈ 20 samples total)

  35 Borehole samples (PNL's Deep microbiological borehole)

- Savage Island soil background data

Figure B-1. Hanford Site Map Showing Locations of Soil Background Sampling Sites.



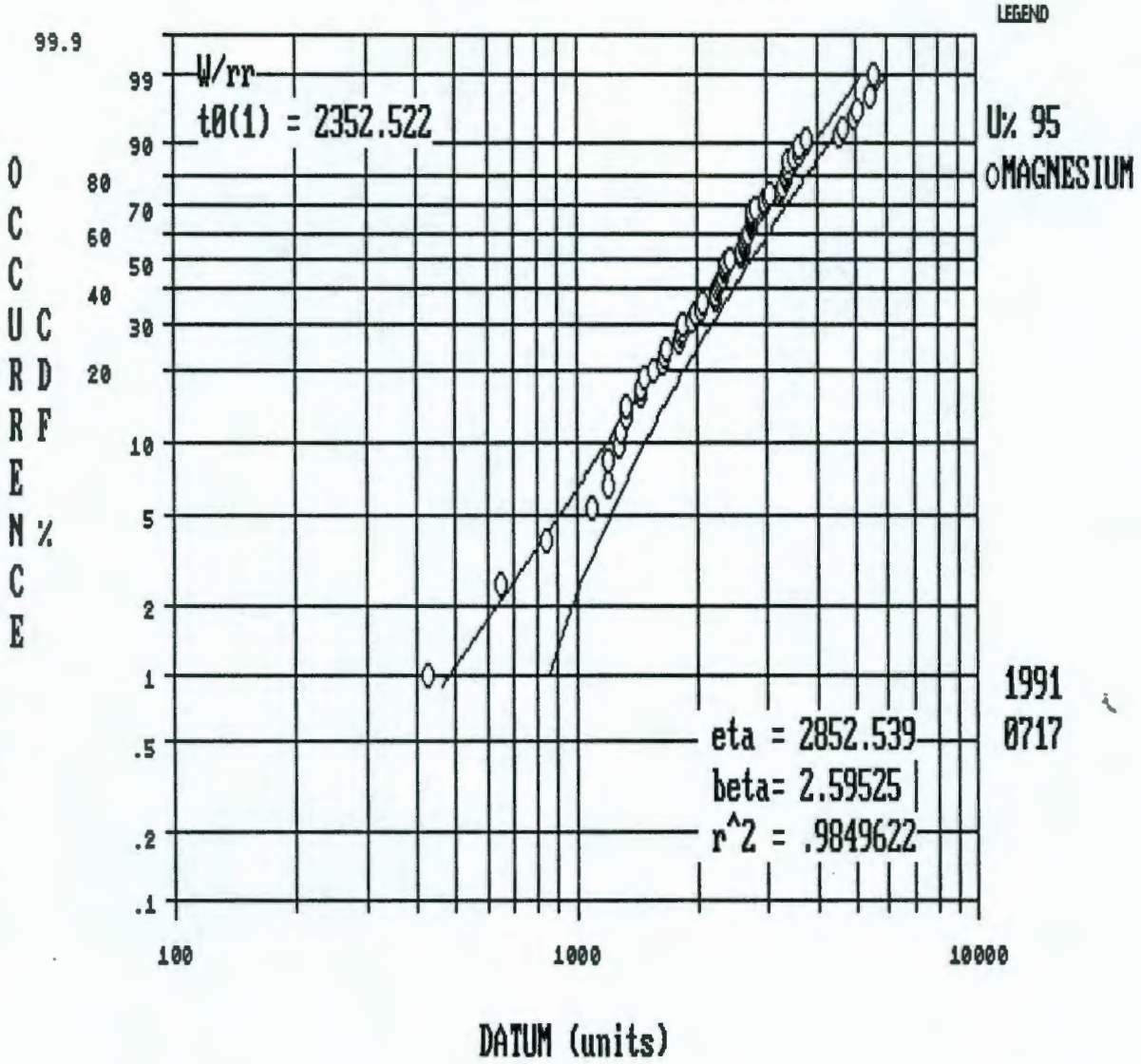
PRELIMINARY NEW RESULTS:

(Existing Background Data + Savage Island Data)

- Generally consistent with Site-wide background data set
- Extended range of threshold levels for some constituents
- Outliers

COMBINED DATA

95/95 = 4873 + To = 7225 PPM



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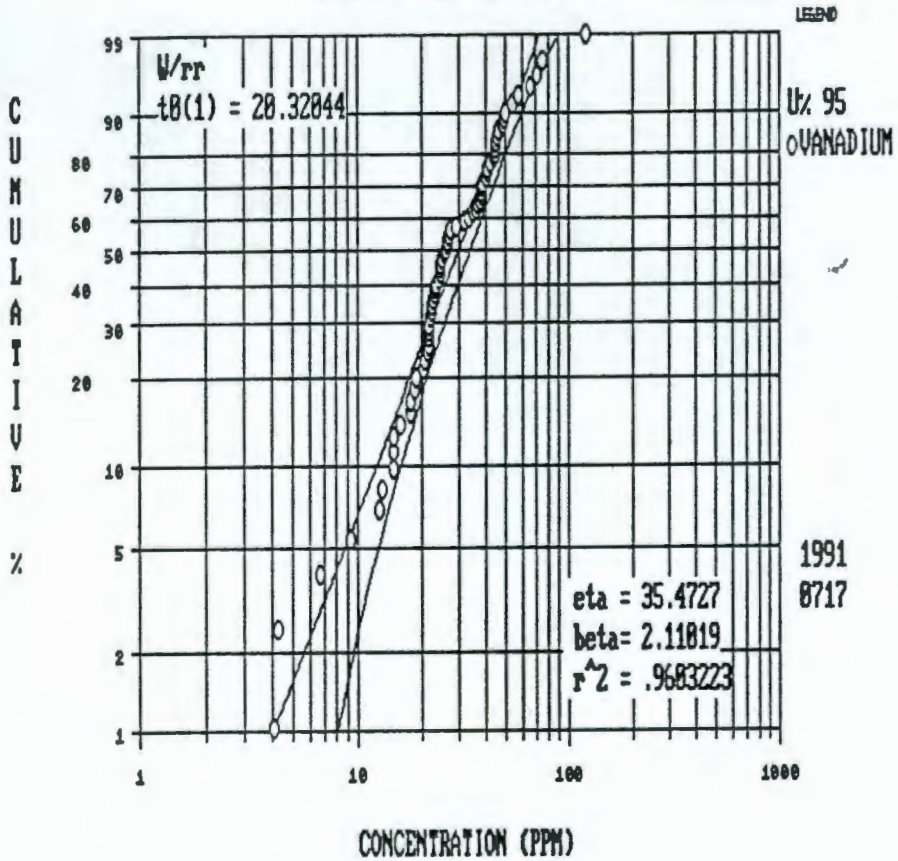
9 1 1 2 2 4 1 0 5 6 0

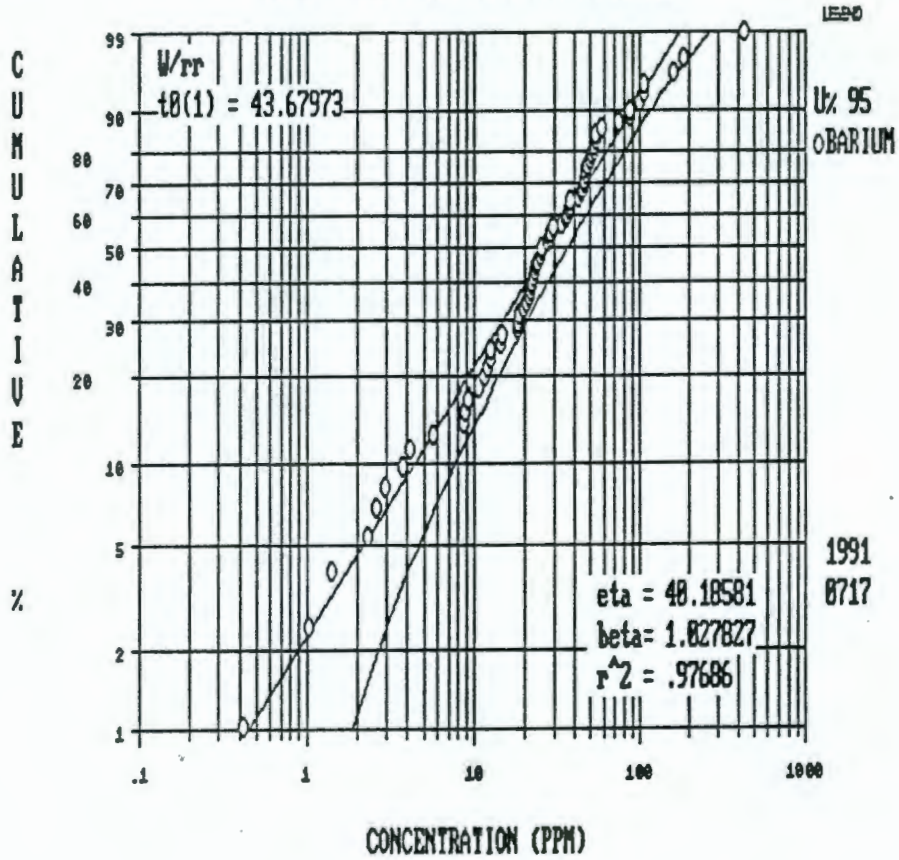
COMBINED DATA

95/95 = 68.5 + To = 89 PPM



COMBINED DATA SET

95/95 = 155 + To = 199 PPM THRESHOLD



BACKGROUND SOIL THRESHOLDS VS. SAVAGE ISLAND MAXIMUM CONCENTRATIONS

Constituent	Concentration Threshold (95/95) (ppm)	Maximum Value (Nugget Effect) (ppm)	Savage Island Max. Values (ppm)
Aluminum	16,573		18,000
Arsenic	4	8	-
Barium	169	229	480
Beryllium	2		10
Cadmium	8		11
Calcium	11,210	14,000	12,000
Chromium	20	48	320
Cobalt	16		110
Copper	21		61
Iron	29,781		25,000
Potassium	2,740		4,600
Magnesium	6,480	6,910	7,900
Manganese	424	533	430
Nickel	18	25	200
Lead	10	13	-
Strontium	43		-
Vanadium	82		140
Zinc	50	112	140

9 1 1 2 2 4 4 0 5 6 3

ISSUES:

- Detection Limit Consistency

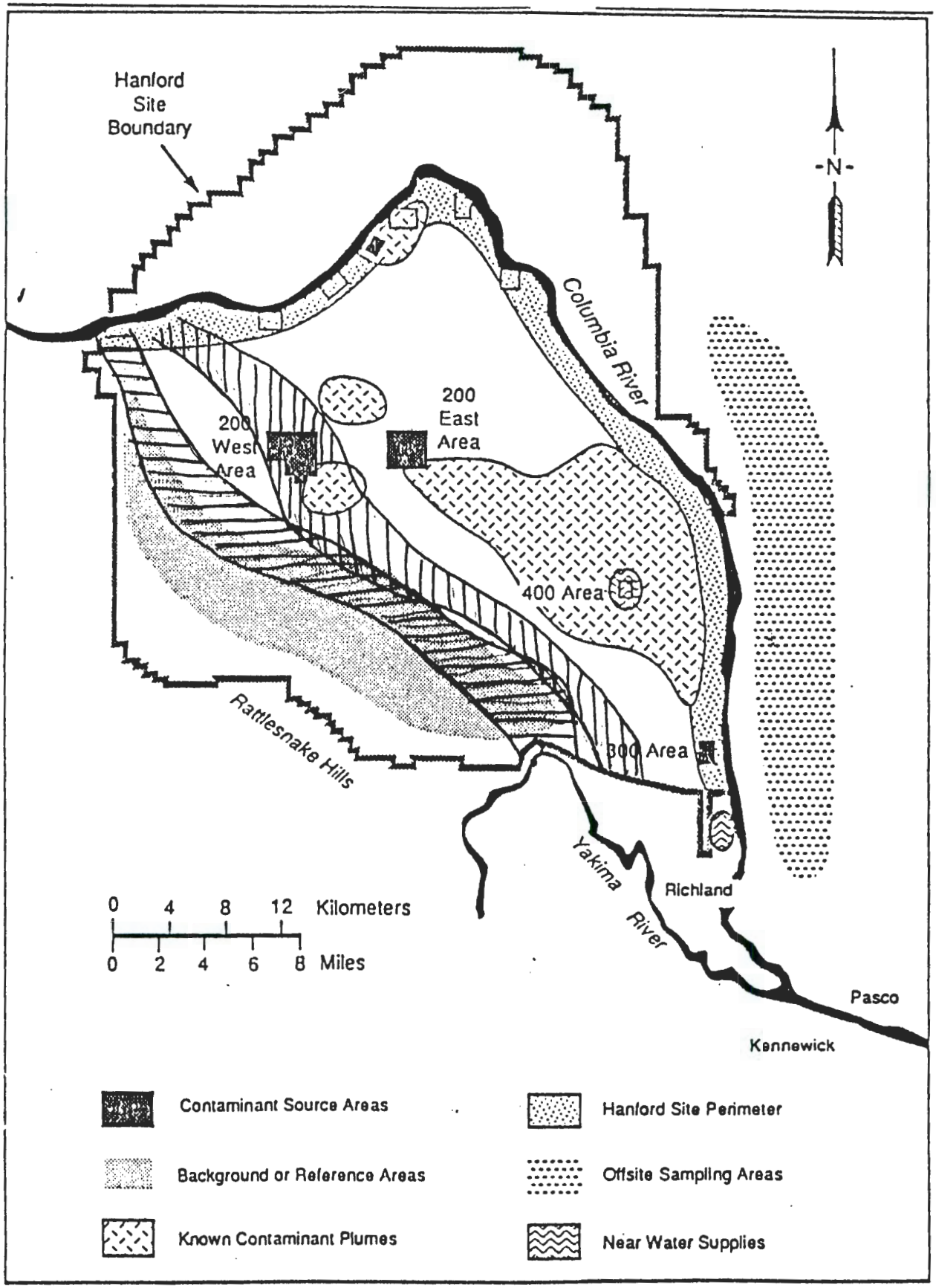


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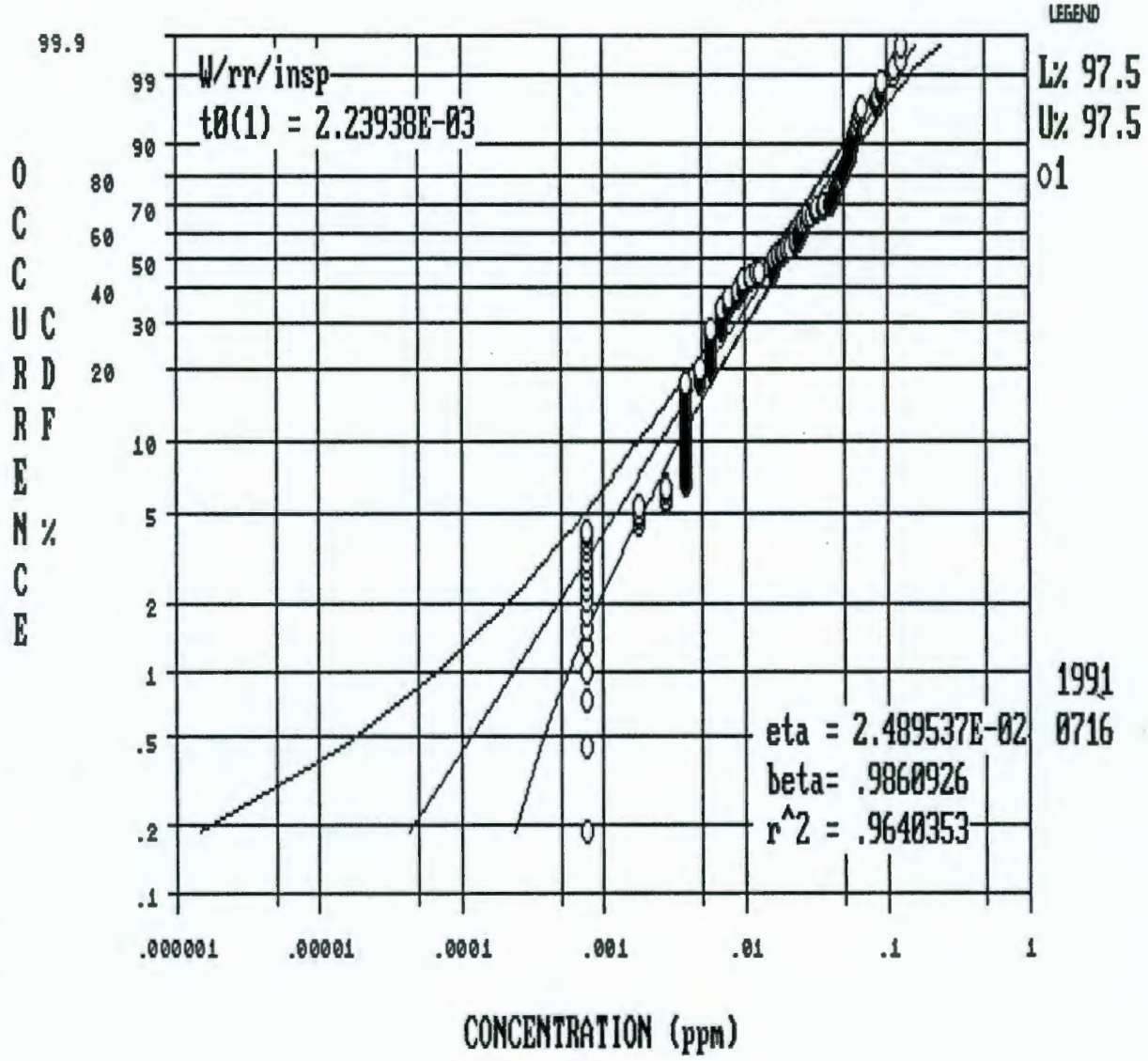
FIGURE 4. Generalized Locations of Wells for Monitoring Purposes

BARIUM: SPRINGS
370 PTS; 95/95=0.086 ppm



1991
0716

9112241056 5

GROUNDWATER BACKGROUND STATUS

Compilation, Interpretation, Summary of Existing Data

- Data acquisition
- Transfer and compilation of data (BWIP data)
- Establish selection and screening criteria
- Preliminary data evaluations

Data Sources:

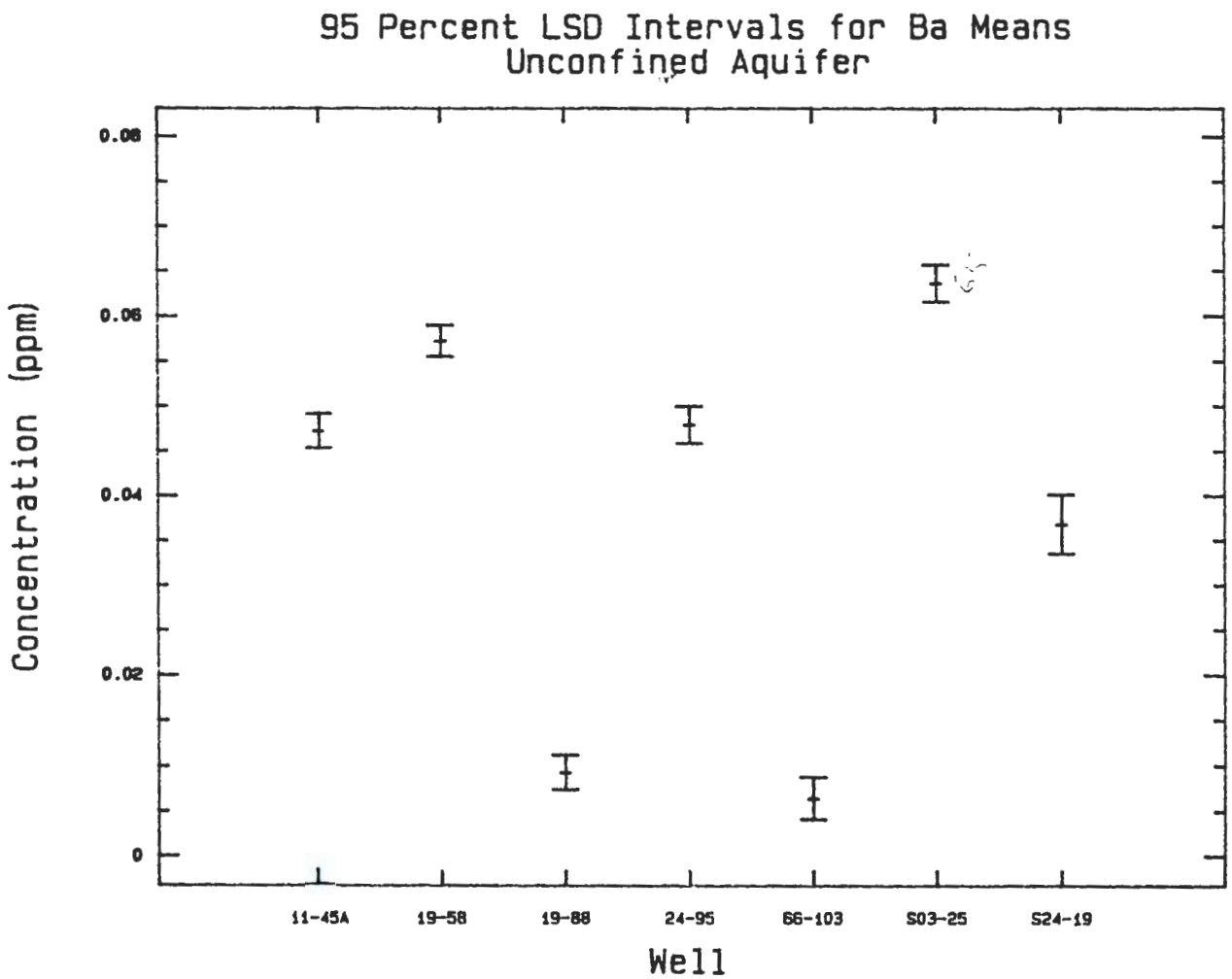
- Hanford Site Groundwater Monitoring Data
- BWIP Well data
- Surface water data (springs, rivers, precipitation)
- U.S.G.S. data
- New data

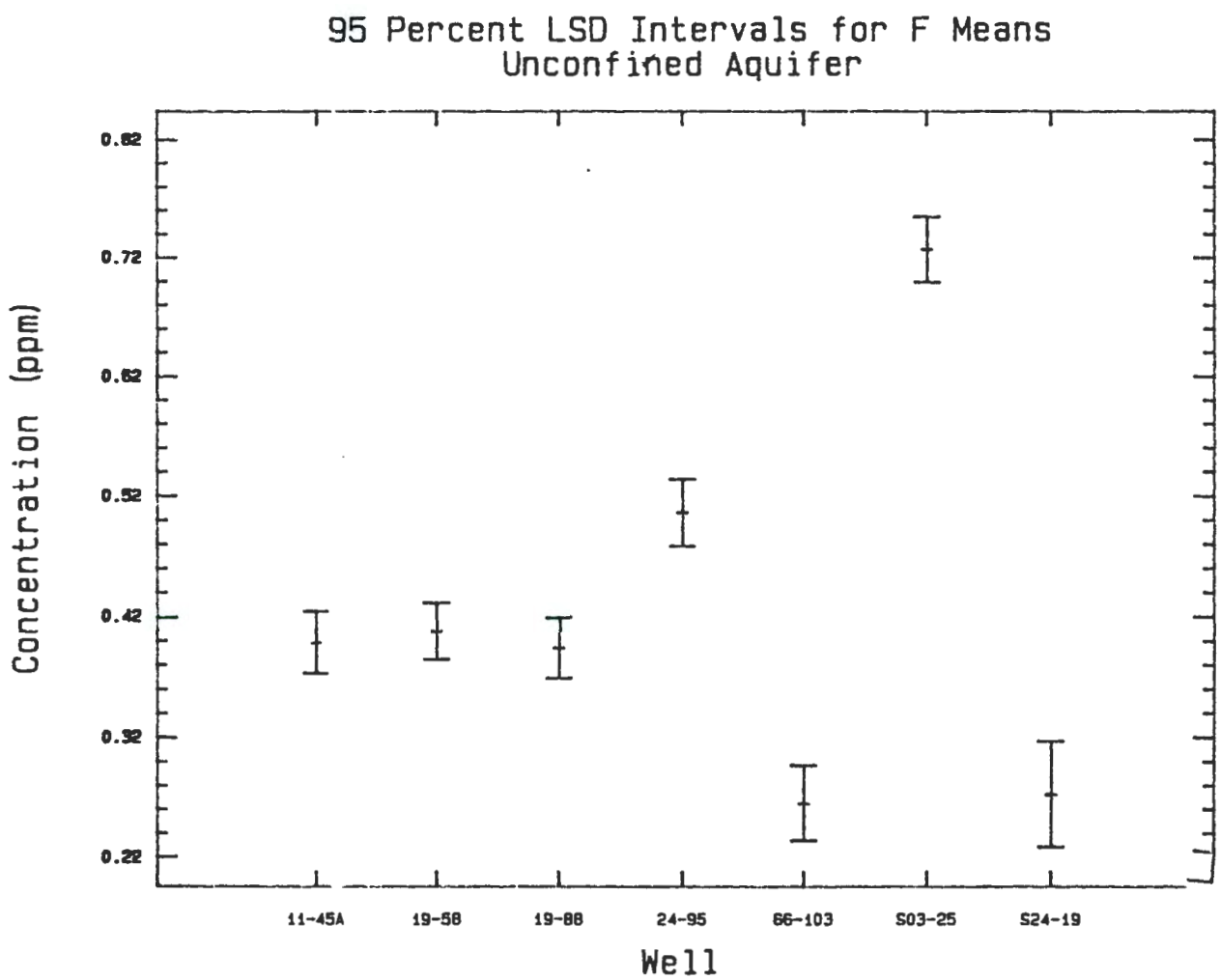
PRELIMINARY RESULTS:

- BWIP Springs data
  - Verification of significance of groundwater background
  - Compositional variation, range, relationships

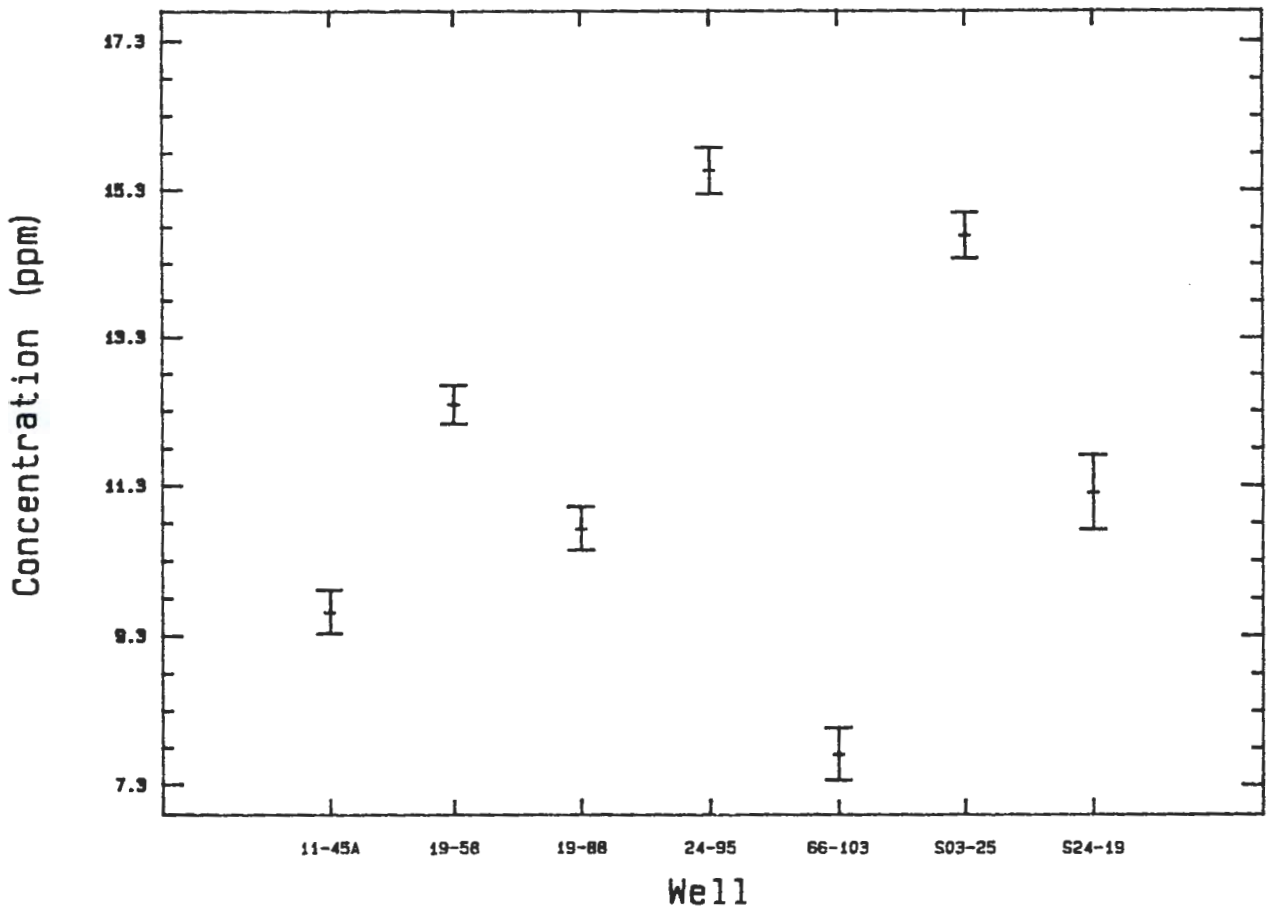
ISSUES:

- Data Screening; Data Quality Objectives

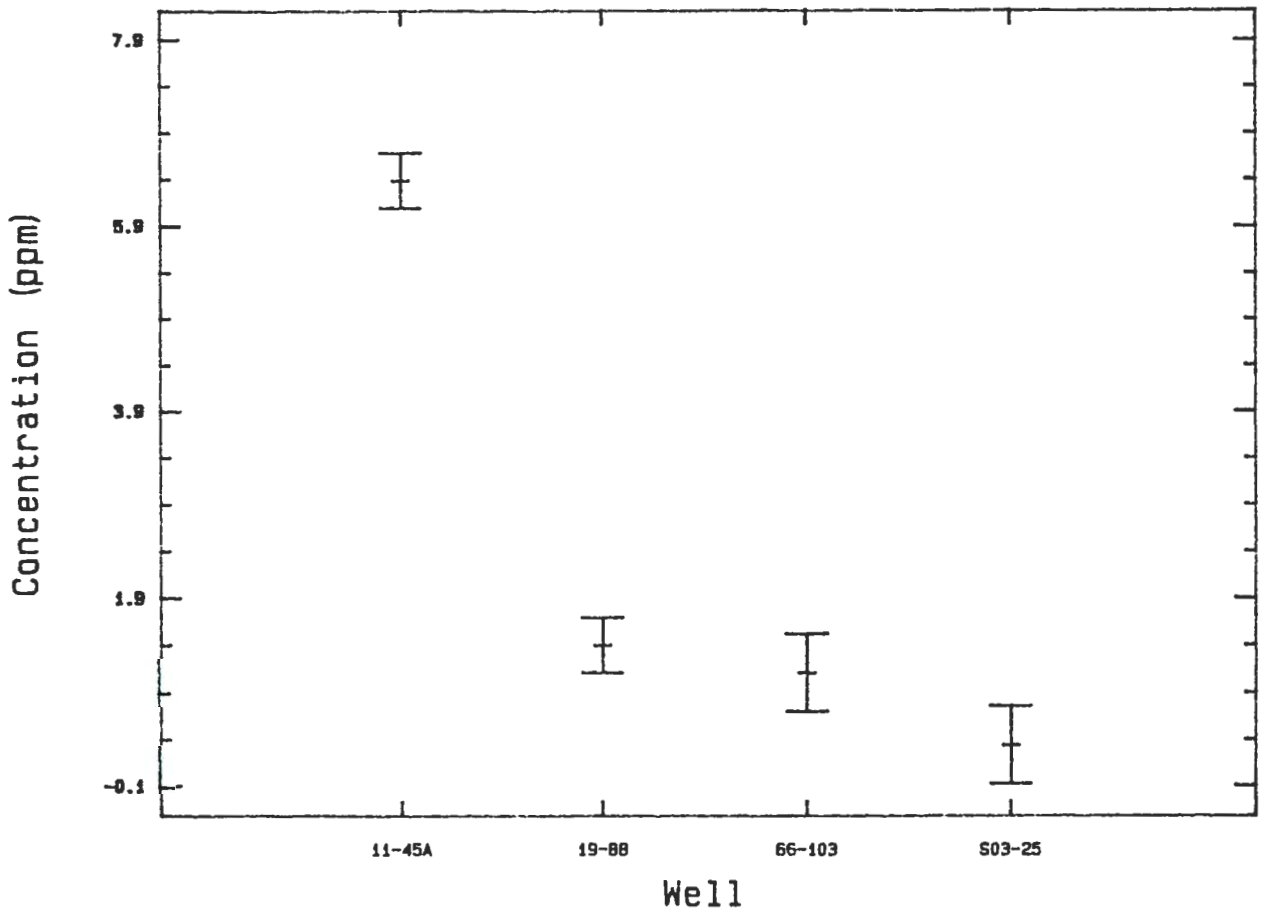

95 Percent LSD Intervals for Ba Means
Unconfined Aquifer
Concentration (ppm)
0.08
0.06
0.04
0.02
0
11-45A
19-58
19-88
24-95
66-103
S03-25
S24-19
Well


95 Percent LSD Intervals for F Means
Unconfined Aquifer
Concentration (ppm)
0.82
0.72
0.62
0.52
0.42
0.32
0.22
11-45A
19-58
19-88
24-95
66-103
S03-25
S24-19
Well

95 Percent LSD Intervals for Mg Means
Unconfined Aquifer



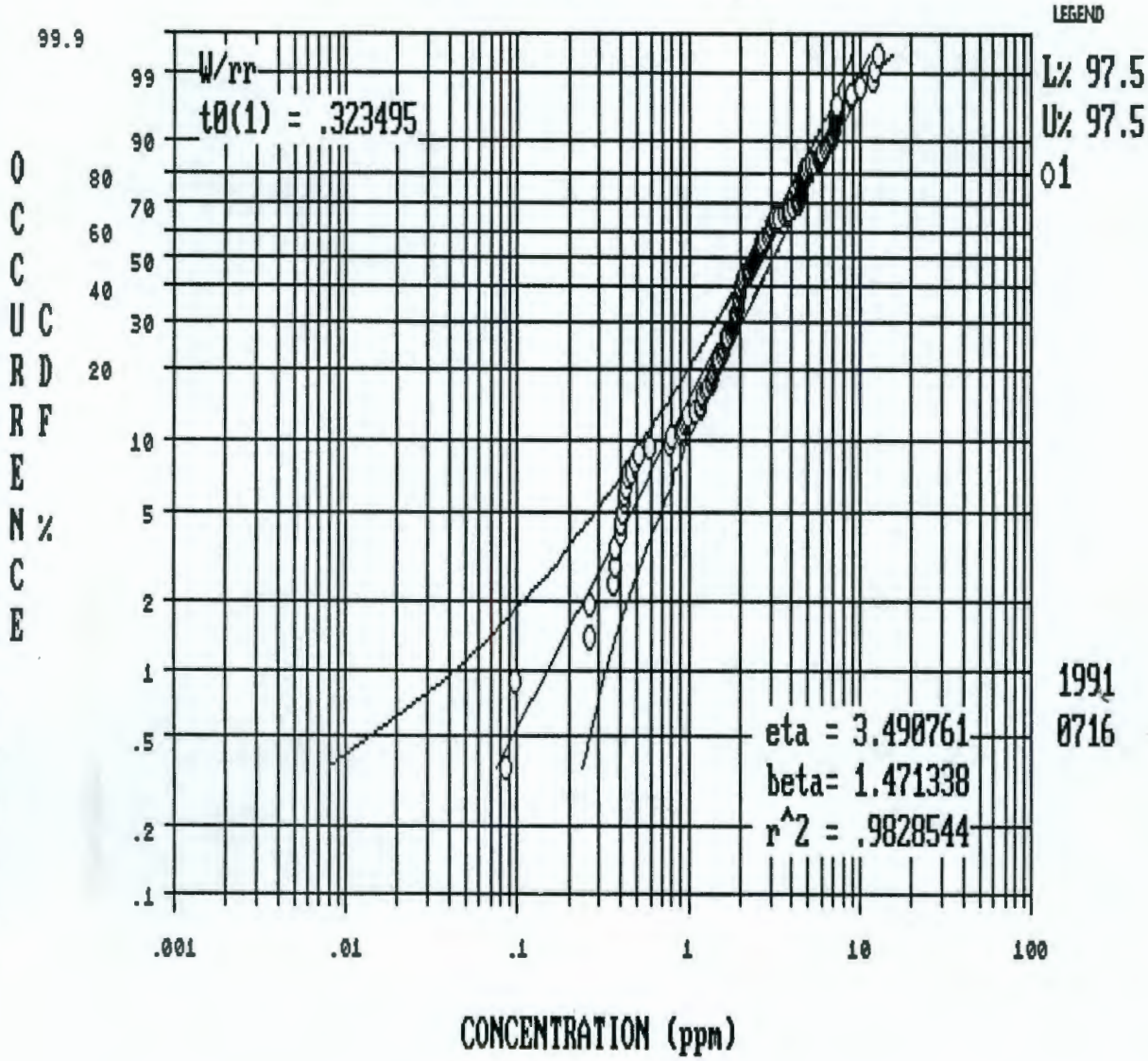
95 Percent LSD Intervals for NO3 Means
Unconfined Aquifer



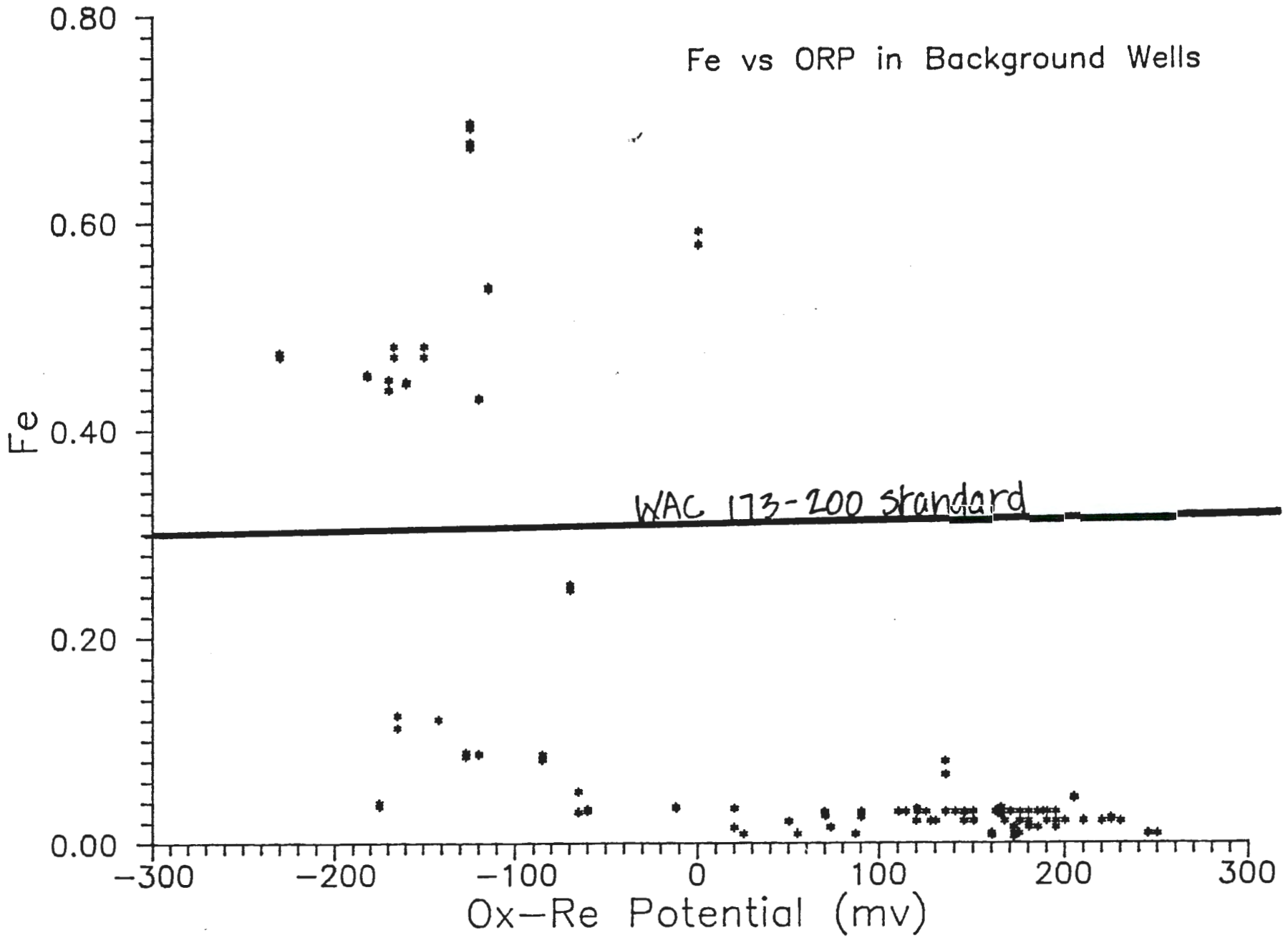
BACKGROUND GROUNDWATER CONCENTRATIONS VS. REGULATORY GUIDELINES

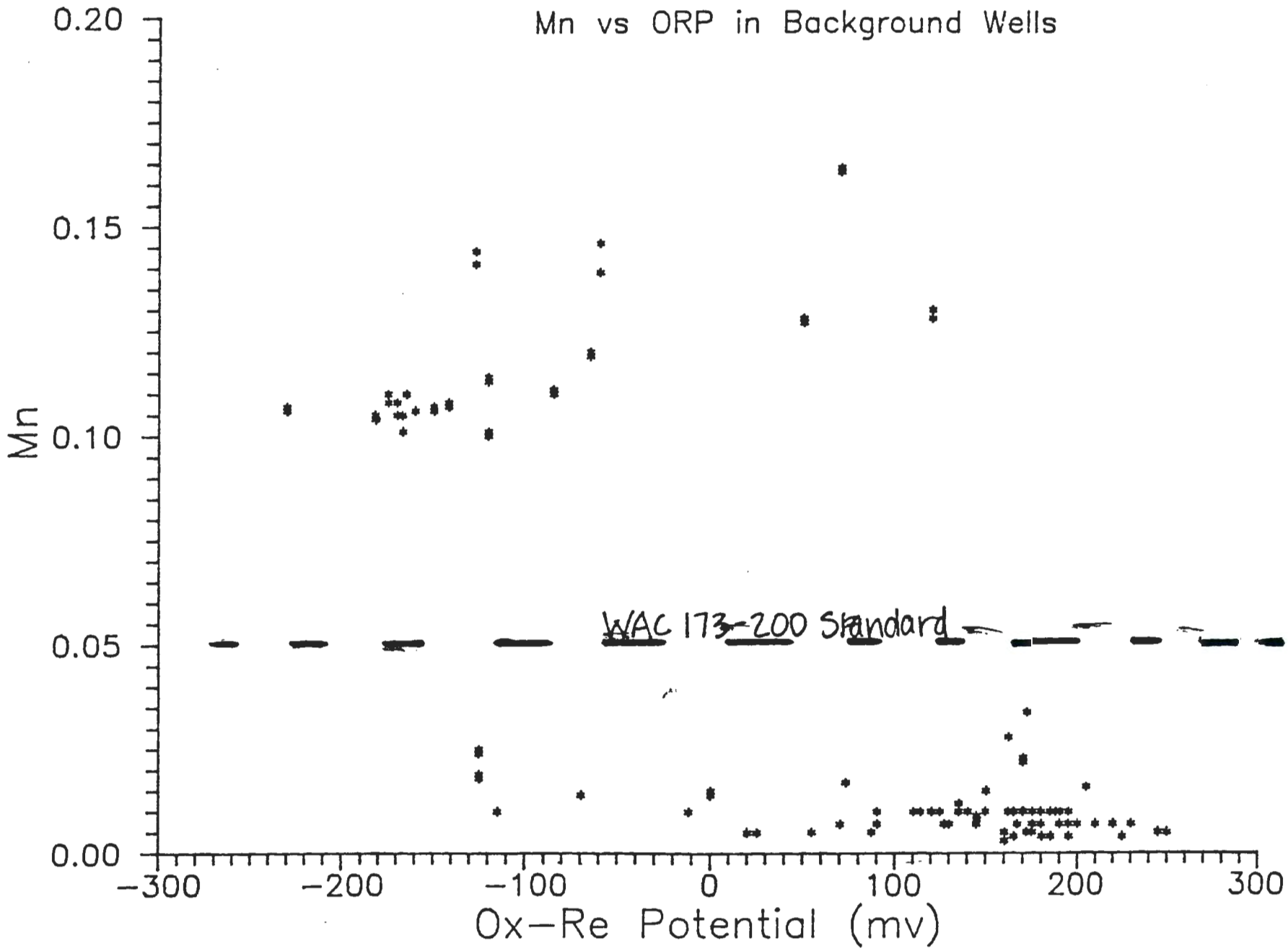
Constituent	Springs (ug/L)	Cold Creek Confined Aquifer (ug/L)	Regulatory Guidelines (ug/L)
Arsenic		50	50
Barium	129	70	1000
Cadmium		9	10
Chromium	36	34	50
Copper	120	5	1300
Fluoride	3300	600	2000
Iron	695		250
Manganese	500		50
Nitrate	40000		45000
Lead	200	200	50
Sulfate	91000	1400000	250000
Zinc	618		5000

POTASSIUM:SPRINGS
194 PTS; 95/95=8.2814 ppm



9 1 1 2 2 4 1 0 5 7 4


Fe vs ORP in Background Wells
WAC 173-200 standard
Fe
0.80
0.60
0.40
0.20
0.00
−300
−200
−100
0
100
200
300
Ox−Re Potential (mv)


Mn vs ORP in Background Wells
Mn
0.20
0.15
0.10
0.05
0.00
-300
-200
-100
0
100
200
300
Ox-Re Potential (mv)
WAC 173-200 Standard