

START

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DON'T SAY IT --- *Write It!*

DATE: November 3, 1993

TO: Lee Michael, H6-08
Charles Pasternak, A7-27
Kevin Clarke, A5-19

FROM: *Walter Perro*
Walter Perro, A5-19

Telephone: 372-3704

cc w/o encl: Julie Erickson, A5-19
Paul Pak, A5-19
Jane Gardner-Clayson, A5-20

**SUBJECT: ALE/NORTH SLOPE WELL DECOMMISSIONING -
MEETING MINUTES 08/09/93**

LEE: Per the request of Dennis Faulk and Dib Goswami, please include the attached information in the Administrative Record for the North Slope.

KEVIN: A copy of the attached was provided by FAX to Randall Tulee, YIN, on November 3rd.

CHARLES: FYI.

THANKS



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MEETING MINUTES

Subject: ALE/NS WELL DECOMMISSIONING

TO: Distribution

BUILDING: 740 Stevens

FROM: M. G. Gardner

CHAIRMAN: D. J. Moak

Dept-Operation-Component	Area	Shift	Meeting Date	Number Attending
Env. Field Services	600	Day	08/09/93	16

Attendees:

Don Moak WHC
Martin Gardner WHC
Rod Ledgerwood WHC
Pat Collier KEH *
Al Potter KEH *
Ron Jackson WHC *
Bob Watkins KEH *
Doug Hildebrand DOE *
Bob Bryce PNL *
Richard Szymarek Ecology
Chuck Cline Ecology
Ken Lane WHC *
Kent Reynolds WHC *
Mike York WHC *
Rex Thompson WHC *
Jerry Bultena WHC *
Barbara Williamson WHC *

* Attended first part of meeting only

The meeting was conducted in two parts. The first part concerned changes to the Water Well Construction Act (1971). The second part addressed the well decommissioning requirements for the Arid Lands Ecology and the North Slope wells.

Richard Szymarek, State of Washington Department of Ecology (Ecology), gave a presentation on the changes to the Water Well Construction Act (1971), Chapter 18.104 RCW, substitute House Bill 1806 (Attachment 1). Key elements of the new law which may affect the Hanford Site well activities included requirements for the tagging of new and reconditioned wells, delegation of regulatory authority to local agencies regarding well sealing and decommissioning, start cards and fees, and licensing of drillers. The only item which immediately affects Hanford are the new start cards and associated fees. These were

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effective as of July 1, 1993. Ecology and The Department of Energy will be working out the details as to how the new requirements will be implemented. With regards to the new driller licensing, a Technical Advisory Committee will be formed. This committee will consist of 12 members with the responsibility to assist in the development and revisions of rules, licensing examinations, and training criteria. The formation of this committee is expected to be completed by October 1993. The majority of the changes to the law will not go into effect until the Washington Administrative Codes (WAC) 173-160 has been revised to incorporate the changes. This revision is not expected to be completed for 12 to 24 months. Only changes regarding fees (start cards) and fines for violations and penalties are in effect as of July 1, 1993.

The second part of the meeting addressed the well decommissioning for the ALE and the North Slope areas. A total of 48 wells were identified as potential candidates for decommissioning (see Attachment 2). Richard Szymarek and Chuck Cline of Ecology reviewed the wells with M.G. Gardner and D.J. Moak of Westinghouse Hanford Company (WHC) and provided regulatory requirements (WAC 173-160) for decommissioning of the groundwater monitoring wells and the water supply wells. The gas wells associated with the ALE are not covered by the WAC 173-160 and are therefore not under the jurisdiction of Ecology. The decommissioning requirements for the gas wells will be addressed in a separate meeting with representatives from the Washington State Department of Natural Resources. The methods to be utilized for decommissioning the water extraction and monitoring wells will not require waivers or variances to be issued from Ecology. Where possible, any materials and fill in the wells will be removed. The well casings will be perforated and the wells pressure grouted. Neat cement will be used as the main plug material in the unsaturated zones (placed through tremie tube). Bentonite and sand will be used in the saturated zones. The wells will be grouted to within 3-6 feet of ground surface, the soil around the casing excavated, the casing cutoff and the excavation backfilled. The well specific requirements and methods as agreed to by Ecology are as follows:

WELL NUMBER	DECOMMISSIONING METHOD
699-S25-51	(Hodges Ranch well) Currently in use as water supply well for the observatory. To be left as is.
699-S18-51	(Army well H52L) Currently in use as water supply well for Battelle facility. To be left as is.
699-S12-29	Either remove PVC piezometers and fill, perforate casing and pressure grout to surface or pressure grout through the piezometer tubes to top of fill, cut off piezometers at top of fill, perforate casing and pressure grout to the surface.
699-3-45	Perforate the well casing from top of existing perforations and pressure grout to the surface.

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- 699-13-64 Remove plug if possible. Perforate the well casing and pressure grout to the surface.
- 699-17-70 Remove plug and fill. Perforate the well casing and pressure grout to the surface.
- 699-19-88 Remove plug and fill. Perforate the well casing and pressure grout to the surface.
- 699-20-82 (Benson Ranch) Remove plug, perforate well casing and pressure grout to the surface.
- 699-24-95 Not enough information. Run camera survey and investigate. Decommission in accordance with WAC.
- 699-26-89 Clean out to bottom as possible, perforate the well casing and pressure grout to the surface.
- 699-36-93 Remove fill and debris by grinding and bailing as necessary, perforate well casing and pressure grout to the surface.
- 699-37-92 Fill well to surface with grout (No need to perforate or pressure grout).
- 699-39-103 Pull casing if possible and fill with grout. If casing cannot be pulled, perforate well casing and pressure grout to the surface.
- 699-43-104 Pressure grout through screen in piezometer to top of existing grout. Cut off the piezometer tube at the top of the grout. Perforate the well casing and pressure grout to the surface paying special attention to the perched water zone.
- 699-79-104 Perforate well casing and pressure grout to bottom of the 24-inch casing. Pressure grout from bottom of 24-inch casing to surface.
- 699-86-95 The lead packers are not to be perforated, but will be encased in cement (do not try to cut and remove). Perforate the 12-inch casing to just below the packer and pressure grout same interval. Perforate the 16" casing to just below the packer and pressure grout the same interval. Pressure grout from top of last grout lift (top of 16-inches) to surface.
- 699-92-14 Decommission using same method as for well 699-86-95.
- 699-93-93 Decommission using same method as for well 699-86-95.
- 699-107-79 Currently being utilized as water supply well. Either leave as is, or if decision made to decommission by the the USA Corp of Engineers, utilize same method as for well 699-86-95.

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- 699-108-20 Unable to locate. Will have surveyed and/or magnetometer flyover to attempt to locate. Once located, its condition will be evaluated and decommissioning method identified. If unable to locate, will call it abandoned.
- 699-111-24 Decommission using same method as for well 699-86-95.
- 699-112-37 Decommission using same method as for well 699-86-95.
- 699-115-61 Decommission using same method as for well 699-86-95.

The farm wells will not be included in this well decommissioning effort (Enyert, O'Brian, Brown, Lemcke, Ford and McGee). None of the water wells to be decommissioned are located upgradient from the gas field wells.

As well decommissioning activities are being conducted, communication with Ecology will be maintained to resolve any field problems arising which impact completion of activities in accordance with the WAC requirements.

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**CHANGES TO THE
WATER WELL CONSTRUCTION ACT (1971)**

**CHAPTER 18.104 RCW
SUBSTITUTE HOUSE BILL 1806**

PRESENTED BY:

**RICHARD SZYMAREK
DEPARTMENT OF ECOLOGY**

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WELL DRILLING UNIT

Mission: Administer and direct the Washington State Well Construction Program.

- Regional Coordination of the Well Drilling Construction Standards - WAC 173-160
- Administer the well drilling licensing and renewal components under WAC 173-162
- Provide Technical Assistance
 - Regional Enforcement Staff
 - Public
 - Other state and local agencies
- Provide legislative support for changes to the laws and regulations - RCW
- Education
- Administer Delegation

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WELL DRILLING UNIT

SCOPE OF WORK FOR 1992

- 10-12,000 Water Wells
- 4-6,000 Monitoring Wells
- 19,000 Public Inquiries for 1992
- 5,400 technical inquiries
- Assist with the proposed revision of the Water Well Construction Act RCW 18.104 (Substitute House Bill 1806)
- Implementation of the Well Drilling Delegation Bill
- Education
 - Well Drilling Association
 - On Site
 - Engineer/Consultant

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MAJOR COMPONENTS OF CILANGE

- Definitions
- Liability Clause
- Well Tagging
- Decommissioning
- Delegation
- Fees
- Limits on Liability
- Licensing
 - Training Program
 - Separation of Resource Protection/Water Well Licenses
 - Term of License
- Revenue Supported Well Drilling Program
- Grants to Local Governments
- Violations and Penalties
 - Restoration Clause
- Technical Advisory Committee

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DEFINITIONS:

Adds and clarifies terms.

LIABILITY:

Extends accountability for improper well construction to ALL parties.

WELL TAGGING:

Requires driller to tag new and reconditioned wells.

DECOMMISSIONING:

Clarifies terms and conditions.

DELEGATION:

Adds tagging to existing delegation authority.

FEES:

Start cards to be submitted by property owner or agent and accompanied by a fee. Fees determined by size and type of well.

- \geq 12 inch diameter = \$200.00
- $<$ 12 inch diameter = \$100.00
- Resource protection/monitoring wells = \$40.00
- Dewatering systems = \$40.00 per 200 lineal feet

Fees are refundable for wells that are not constructed.

LIMITS ON LIABILITY:

Reduces drillers' liability on well construction to three years (new wells) and six years for wells previously constructed.

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LICENSING:

- Establishes training program.
- Separates resource protection and water well licenses.
- Increases license renewal term to two years.
- Requires continuing education for license renewal.

REVENUE SUPPORTED WELL DRILLING PROGRAM:

All fees paid go towards the support of the well drilling program.

- Education
- Training
- Grants for delegation
- Increased inspections

VIOLATIONS AND PENALTIES:

Defines minor, serious and major violations. Establishes penalties for each of these categories.

- Minor: \$100 - \$500
- Serious: \$500 - \$5,000
- Major: \$5,000 - \$10,000

Penalties collected can only be spent for restoration of ground water resource.

TECHNICAL ADVISORY COMMITTEE:

12 member group: six drillers, six others. Responsibility of this group will be to assist in the development and revisions of rules, licensing examinations, training criteria, etc.

1020-600-136

1993 Well Drilling Legislation
ESHB 1806

ESHB 1806 is a comprehensive bill which addresses a multitude of issues. The bill focuses on well drilling concerns designed to protect public health and safety. This new legislation becomes effective July 1, 1993. Highlights include:

LIABILITY EXTENDED BEYOND WELL DRILLERS

Requirement that wells be constructed according to the Department of Ecology's Construction Standards is expanded to apply to all individuals, not just licensed contractors and operators. Therefore, contractors, drillers, engineers and property owners are now accountable for wells that do not meet the state's standards. It is now a violation of the law to construct a well before start cards and the required fees are submitted to Ecology.

WELL TAGGING REQUIRED AND DECOMMISSIONING CLARIFIED

Requires driller to tag new and reconditioned wells and clarifies terms and conditions of well decommissioning.

MORE DELEGATION TO LOCAL GOVERNMENTS

Delegates additional authority to local governments to ensure that all wells are tagged.

NEW FEE STRUCTURE ESTABLISHED

Start cards must be submitted by well owners or the owners' agent and must be accompanied by the required fee. Fees are now determined by the size and type of well, as follows:

- Greater than or equal to 12 inch diameter \$200.00
- Less than 12 inch diameter \$100.00
- Resource protection/monitoring wells \$ 40.00
- Dewatering systems \$ 40.00 per 200 lineal feet

All fees collected go towards support of the well construction and licensing program. Fees will be refunded for wells that are not constructed. Grants may be provided to local governments who have been delegated responsibility to enforce portions of the well construction program.

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LIMITS WELL DRILLERS' LIABILITY

Reduces well drillers' liability on well construction to three years on new wells, and six years for wells completed before July 1, 1993. Therefore, if a well was improperly constructed on July 2, 1993, Ecology has until July 1, 1996 to order the well contractor to repair or decommission the well. If a well was improperly constructed on June 15, 1993, Ecology has until June 14, 1999 to order the well contractor to repair or decommission the well. In both situations, the wells will be evaluated utilizing the construction standards in effect at the time each well was substantially completed.

LICENSING

Separates resource protection licenses and water well licenses, and establishes training licenses (apprenticeship programs) for both categories. Application fees and the rules regarding experience and training necessary to receive these licenses will be established by the technical advisory group (see next page).

LICENSE RENEWAL TERM EXPANDED

Increases the license renewal term to two years, instead of one year. Continuing education will be required for license renewal. Rules regarding renewal fees and continuing education requirements will be established by the technical advisory group.

PENALTIES INCREASED

The penalties that may be imposed for violations are increased from the current \$100.00 a day maximum. Three classes of violations are established. Minor violations are those that do not seriously threaten public health or the environment. They include failing to submit notification cards and well reports within the time required. *The penalty for a minor violation is a fine of between \$100.00 and \$500.00.* A person who has committed a minor violation must be given an opportunity to correct the violation before a penalty is imposed.

Serious violations are those that pose a serious threat to public health or the environment. They include improper construction, intentional improper siting, drilling with an expired or suspended license, and construction of a well without a water right permit, if required. *A serious violation is subject to a penalty of between \$500.00 and \$5,000.00.*

A major violation consists of construction of a well without a license or after a license has been revoked. *This type of violation is subject to a penalty of between \$5,000.00 and \$10,000.00.*

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Penalties may be appealed to the Pollution Control Hearings Board. All revenues from penalties are to be spent only for restoration and enhancement of ground water resources.

LICENSING EXEMPTION RESTRICTED

The exemption from licensing for a person to construct a well on his or her own property is limited to wells for single-family residences. A person may construct only one well every two years under the exemption.

TECHNICAL ADVISORY GROUP TO BE ESTABLISHED

A technical advisory group will be established to assist in developing and revising well drilling rules; developing training criteria for well inspectors, contractors, and operators; and other aspects of the well construction and licensing program. The group is composed of 12 members as follows:

Department of Ecology	2
Resource protection/water well drillers	6
State Department of Health	1
Local Health Department	1
Professional Engineer	1
Scientist knowledgeable in well design and construction	1

If you'd like more clarification or a complete copy of the bill, please contact Ecology's regional well drilling coordinators listed below.

Rod Thompson, Northwest (206) 649-7044

Laurie Morgan, Southwest (206) 586-6377

Gene Potts, Central (509) 575-2639

Dan Weis, Eastern (509) 456-4410

Richard Szymarek, Headquarters (206) 459-6122

Verna Cleveland, Headquarters (206) 459-6045

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HANFORD WELL DESIGNATION	HANFORD COORDINATES N/S	W/E	TWNS/RNGE/SECT	COMMON NAME	USGS Number	Date Drilled	Drilled Depth	Depth Water	Casing Size	Ref Elev	Comments	
699-S25-51	S	24,500	W 51,000	T10N/R26E-S11D1	Hodges Ranch		ND	420	358	6-in	1,320	Water supply
699-S18-51	S	18,000	W 51,000	T11N/R26E-S34R	Army Well H52L		May1958	1,000	800	Mult	1,211	Water supply
699-S17-56	S	16,780	W 55,700	T11N/R26E-S34M1	NW Natural Gas #4		Jun1931	980	ND	ND	1,420	
699-S15-62	S	14,500	W 62,250	T11N/R26E-S32A	North Pacific #1		1931	100	NA	ND	1,880	
699-S13-61	S	13,200	W 61,200	T11N/R26E-S28N1	NW Natural Gas #2		Sep1930	1,281	ND	ND	1,710	
699-S12-29	S	11,694	W 29,467	T11N/R27E-S28M1	GW Monitoring		Oct1962	190	85	8-in	488	
699-S12-60	S	11,560	W 59,550	T11N/R26E-S28L1	NW Natural Gas #5		Jul1931	650	ND	ND	1,380	
699-S11-60	S	10,500	W 60,050	T11N/R26E-S28F1	NW Natural Gas #3		Nov1930	757	ND	ND	1,350	
699-S10-62	S	9,800	W 62,088	T11N/R26E-S29B3	Walla Walla #8		1930	750	ND	ND	1,420	
699-S10-66	S	9,950	W 66,050	T11N/R26E-S27E1	Big Bend #1	462442 119325701	<1920	670	ND	ND	1,150	
699-S9-54	S	8,600	W 53,800	T11N/R26E-S27G1	Conservative #1		<1924	806	450	ND	1,020	
699-S9-56	S	9,200	W 55,600	T11N/R26E-S27D1	Goodwin #1	462456 119333001	1920	2,212	ND	ND	1,130	Cored
699-S9-62A	S	8,830	W 62,200	T11N/R26E-S29B2	Walla Walla #7		<1930	763	ND	ND	1,360	
699-S9-62B	S	8,650	W 61,550	T11N/R26E-S28D1	NW Natural Gas #1		May1930	712	ND	ND	1,320	
699-S9-63B	S	8,642	W 63,227	T11N/R26E-S29B1	Walla Walla #6A	462458 119345001	Apr1933	3,660	ND	ND	1,436	
699-S9-65	S	9,020	W 64,670	T11N/R26E-S29C1	West Coast #2		1931	850	ND	ND	1,560	
699-S8-61	S	8,100	W 61,050	T11N/R26E-S21L3	Walla Walla #9		1930	700	ND	ND	1,240	
699-S8-65	S	7,900	W 65,450	T11N/R26E-S20N	Walla Walla #107		Nov1930	663	ND	ND	1,480	
699-S7-62D	S	6,500	W 61,600	T11N/R26E-S21M1	WW #2/Blue Hen	462520 119342001	1917	800	ND	ND	1,180	
699-S7-62C	S	7,300	W 62,000	T11N/R26E-S20R3	West Coast #1		1930	705	ND	ND	1,280	
699-S7-62B	S	7,300	W 62,000	T11N/R26E-S20R2	Walla Walla #5		<1925	780	ND	ND	1,300	
699-S7-62A	S	7,300	W 62,000	T11N/R26E-S20R1	Discovery Well #1	462508 119343001	1913	1,234	ND	ND	1,275	
699-S6-64	S	6,150	W 64,100	T11N/R26E-S20L1	Yellowhawk #1	462522 119351001	May1930	715	ND	ND	1,280	
699-S4-57	S	4,000	W 56,000	T11N/R26E-S21G1	Walla Walla #4		<1925	640	300	ND	960	
699-S3-67	S	3,150	W 67,200	T11N/R26E-S19A1	Walla Walla #3	462550 119354701	1920	1,507	ND	ND	1,250	
699-S3-116B	S	3,102	W 115,608	T11N/R24E-S15R2	DH-2		1969	600	NA	3-in	2,882	Offsite
699-S2-61	S	2,400	W 60,900	T11N/R26E-S16N1	Colfax #1	462556 119341601	<1924	740	ND	ND	1,020	
699-S1-67	S	1,400	W 67,200	T11N/R26E-S18J1	Walla Walla #6		<1925	205	NA	ND	1,125	
699-3-45	N	3,007	W 45,007	T11N/R26E-S12N1	GW Monitoring		Nov1962	175	98	8-in	504	
699-10-99	N	10,200	W 98,550	T11N/R25E-S5E1	Rattlesnake Gas #11		1922	1,003	ND	10-in	1,160	
699-13-64	N	12,596	W 63,975	T11N/R25E-S3B17	USGS#4 GW Monitoring		Oct1950	167	125	8-in	552	
699-17-70	N	17,000	W 70,000	T12N/R25E-S31C1	GW Monitoring		Oct1958	286	90	8-in	563	
699-19-88	N	19,185	W 87,736		GW Monitoring		Nov1957	388	134	8-in	644	
699-20-82	N	19,849	W 82,342	T12N/R25E-S26M1	Benson Ranch		Mar1929	2,000	210	Mult	614	Downhole flow
699-24-95	N	24,000	W 95,000		ALE water supply		ND	ND	ND	ND	ND	Water supply
699-26-89	N	26,000	W 89,000		GW Monitoring		Dec1962	500	175	8-in	653	
699-36-93	N	36,000	W 93,000		GW monitoring		Nov1961	700	ND	8-in	645	
699-37-92	N	36,579	W 91,788		DH-22		Aug1981	688	ND	4-in	645	Corehole
699-39-103	N	39,344	W 103,063		Not used		Mar1976	160	ND	8-in	890	
699-43-104	N	42,979	W 104,298	T12N/R25E-S6D1	GW monitoring		Nov1957	464	285	8-in	766	
699-49-111A	N	49,381	W 111,355	T13N/R24E-S36D1	Enyeart farm well	463436 119460801	Nov1922	1,092	Flows	4/6-in	910	
699-49-111B	N	49,379	W 111,471	T13N/R24E-S26G1	O'Brian farm well	463513 119464001	Oct1922	707	Flows	10/7-in	972	
699-52-117	N	52,000	W 117,000	T13N/R24E-S26M1	Brown farm well	463456 119471701	Oct1918	668	Flows	5-in	1,025	
699-52-118	N	52,254	W 117,954	T13N/R24E-S27K1	Lemcke farm well	463458 119475501	Dec1921	711	16	7/5-in	1,092	
699-53-103	N	52,737	W 103,415	T13N/R25E-S30G	McGee farm well		1927/1983	3,123	Flows	8/5	837	
699-53-111	N	52,993	W 111,401	T13N/R24E-S25E1	Ford farm well	463510 119460801	Aug1925	777	Flows	10/8-in	925	
699-79-104	N	79,000	W 104,000	T14N/R25E-S31M1	Army Well 515 PSN 82		Feb1953	699	376	24/16-in	776	Water supply
699-86-95	N	86,000	W 95,000	T14N/R25E-S28E1	Army Well H83C		?1953	648	ND	16/12-in	873	
699-92-14	N	92,000	W 14,000	T14N/R27E-S24C1	Army Well PSN 505 #9		Nov1953	1,396	383	Mult	862	
699-93-93	N	93,000	W 93,000	T14N/R24E-S21B1	Army Well 525 PSN H83L		May1953	520	240	24/20-in	639	
699-107-79	N	107,000	W 78,890	T14N/R25E-S1D	Army Well PSN 410 #2		May1952	938	182	Mult	659	
699-108-20	N	108,000	W 20,000	T14N/R27E-S2C1	Army Well 500-1		Jan1952	635	287	Mult	698	Cannot locate
699-111-24	N	111,000	W 24,000	T14N/R27E-S34L2	Army Well PSN 500		Jan1952	636	271	Mult	699	
699-112-37	N	111,737	W 36,569	T15N/R27E-S32E	Army Well PSN 535 #8		Jan1954	1,123	262	Mult	742	
699-115-61	N	114,633	W 60,557	T15N/R26E-S28Q1	Army Well PSN 420 #7		Sep1953	892	317	Mult	791	