

MEMORANDUM

TO: Members, Wyoming Legislature & Other Interested Parties

FROM: Dennis Hemmer, Director
Wyoming Department of Environmental Quality

DATE: 20 December 2000

SUBJECT: **2000 Annual LAUST Remediation Program Report**

Pursuant to W.S. 35-11-1414(d), the attached 2000 Annual LAUST Remediation Program Report is respectfully submitted for your review and information. This report summarizes environmental restoration expenditures through calendar year 2000.

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WATER QUALITY DIVISION
LAUST REMEDIATION PROGRAM
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2000 ANNUAL LAUST REMEDIATION PROGRAM REPORT

15 December 2000

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SECTION A PROGRAM ADMINISTRATION

I. **General Overview.** During 2000, the number of unresolved contaminated leaking aboveground & underground storage tank (LAUST) sites declined for the first time since the program started. As of 7 December 2000, a total of 1,504 contaminated LAUST sites, which require some degree of active environmental remediation, existed in the state. Of these 1,504 contaminated sites, 421 have cleaned up by the department, which leaves the number of unresolved contaminated sites at 1,083. In 1999, the number of unresolved contaminated sites was 1,135. For comparison, the number of contaminated sites requiring cleanup in December 1991, when the program was started, was 475. During 2000, the number of unresolved contaminated sites has been reduced by 52.

The Statute requires the WDEQ to clean up the contamination caused by program eligible LAUST releases based on a priority ranking score which is based on (1) the degree of immediate adverse health exposure and/or safety hazards to people in nearby occupied buildings or to public utilities; (2) surface and ground water quality protection; (3) potential for LAUST contaminants to migrate; and, (4) ecological protection. The statute also provides that the department's financial obligations for remediation actions are limited to the funds available in the corrective action account. The department is remediating eligible contaminated LAUST sites as funding in the corrective action account allows. Given the statutory limitation on the department's financial obligation for LAUST remediation, costs beyond the amounts held in the corrective action account have not, and will not, be incurred.

The financial responsibility account is intended to provide for financial assurance coverage required by federal law for the purpose of compensating third parties for a portion of damages caused by releases from program eligible LAUSTs. The statute provides that nothing in the Wyoming Environmental Quality Act shall be construed to authorize commitments to cover property or personal injury damages in excess of the available balance in the financial responsibility account.

II. **UST/LUST Program Primacy Application to EPA.** A program primacy application package was prepared and submitted by the department to the EPA, Region VIII, Office in Denver, CO, in March 1999 with supplemental information provided to EPA in July 1999. The department continues to wait review of the State's application to EPA. If Wyoming is granted primacy for the program in this state, citizens and tank owners/operators will not see any day-to-day changes; however, the state will receive full responsibility for program administration with a reduced federal oversight role. Since federal regulations for aboveground storage tank systems have not been established, program primacy will apply only to underground storage tanks.

SECTION B PROGRAM STATISTICS

I. **State UST/LUST Database Information.** TABLE 1 summarizes major UST statistics for the past six years. The statistics represent **total** counts for each year. On average, a present day active facility typically consists of almost two active USTs in Wyoming.

**TABLE 1
UST PROGRAM STATISTICS**

CATEGORY	1995	1996	1997	1998	1999	2000
USTs	9,178	9,279	9,413	9,546	9,577	9,689
Facilities	3,554	3,582	3,601	3,672	3,683	3,611
Active USTs	2,694	2,525	2,478	2,214	2,089	2,085
Permanently Closed	6,426	6,727	6,904	7,441	7,488	7,604

Based on the above six year programmatic data, the following conclusions may be made:

- ✓ Taking into account the present number of tanks and the number of USTs permanently closed, 78.5% of the USTs in Wyoming are no longer in use.
- ✓ The number of active USTs have shown a 22.5% **decrease** over the six years while the number of facilities have shown an average 1.5% **increase** over the same period.

AUST/LAUST program financial and contaminated site information for the past five years is presented in TABLE 2 on the next page.

**TABLE 2
AUST/LAUST OPERATIONAL STATISTICS**

CATEGORY	1996	1997	1998	1999	2000
AUST Tank Fees*	\$572	\$523	\$505	\$564	\$511 [†]
Total LAUST Sites	1,350	1,435	1,457	1,496	1,504
Resolved Sites	337	355	359	361	421
Unresolved Sites	1,013	1,080	1,098	1,135	1,083
Site Fees*	\$132	\$127	\$111	\$174	\$114 [†]

* \$1,000 dollars

[†] Twelve month period ending November 2000

The following conclusions may be made about the above five year data concerning contaminated LAUST sites:

- ✓The number of unresolved LAUST contaminated sites has declined for the first time since the program was started in 1991.
- ✓Cleanups completed during UST tank removal operations have been drastically reduced due to the reduced availability of acceptable contaminated soil disposal options. Removal, transport, and disposal of petroleum contaminated soils at department authorized solid waste landfill treatment areas has been the only state-wide option. If groundwater has not been extensively impacted by a LUST release at the time of tank removal and if the soil contamination is confined to the UST excavation, the department has experienced limited success in cleaning up some contaminated sites during tank removal operations. When this option is available, it has had a favorable impact on program costs for environmental restoration actions.

II. **AST/LAST Database Information.** Aboveground storage tanks required by the Environmental Quality Act to be registered with the department and eligible for the state correction action program include those ASTs whose owners are dealers which sell, or offer to sell, gasoline or special fuels directly to the public. TABLE 3 summarizes the AST statistics.

**TABLE 3
AST PROGRAM STATISTICS**

CATEGORY	1995	1996	1997	1998	1999	2000
Number of ASTs	354	381	390	400	406	414
Number of Facilities	105	113	116	99	95	99
Active ASTs	347	342	325	300	286	288

**SECTION C
LAUST REMEDIATION ACTIVITIES**

I. LAUST Immediate Response Actions. LAUST immediate response actions are taken by the department when imminent contamination of a water supply is threatened, or when complaints of high indoor petroleum vapors in homes, business establishments, or occupied confined spaces are received and an on-site evaluation confirms an imminent potential environmental health problem. These immediate response actions are taken to contain the subsurface plume, to determine the extent of any imminent health and/or safety hazards caused by the LAUST release, and to take whatever actions are necessary to stabilize the site.

TABLE 4 indicates the projects and total costs associated with LAUST immediate response actions taken by the department during the past ten years.

**TABLE 4
LAUST IMMEDIATE RESPONSE ACTIONS**

RESPONSE LOCATION	CONTRACT COST	SPENT TO DATE
Lusk (Trail Side Store)	\$46,507	\$46,507
Sheridan (5th & Main St)	\$86,284	\$86,284
Greybull (Miller's Garage)	\$253,389	\$253,389
Moorcroft (Coffee Cup)	\$14,065	\$14,065
Laramie (North, Pizza Hut)	\$98,200	\$59,423
Newcastle (Library)	\$42,307	\$42,307
Table Rock	\$121,388	\$121,388
Greybull AST (McIntosh Oil)	\$64,538	\$64,538
Kemmerer (Storm Drain)	\$168,263	\$151,083
Sheridan (Philtown)	\$73,407	\$73,407
Lyman	\$16,918	\$16,918
Gillette (Stonepile Creek)	\$44,861	\$44,861
Laramie (ACPE FCU)	\$32,040	\$32,040
Wind River (Crowheart Store)	\$59,109	\$40,014
Hulett (Ted's Service)	\$14,835	\$0 ⁺
TOTALS	\$1,136,111	\$1,046,224
AVERAGE COST/RESPONSE	\$75,741	

⁺ Immediate Response Contract initiated on 4 December 2000.

II. LAUST Remediation Projects. The goal of the LAUST remediation program is to accomplish subsurface investigations (SSI) at known contaminated sites on a priority basis and to initiate full remediation actions following a remediation priority system for the worst sites first. To accomplish these tasks, the department currently has short-listed 29 contractors for the subsurface investigation work, 22 engineering design consultants to design environmental cleanup technologies, and 23 remediation system operation and maintenance firms to operate constructed remediation systems.

During 2000, a goal of the program will be to accomplish modified subsurface investigations at 153 lower priority (< priority ranking scores of 400) contaminated sites to determine whether or not these sites continue to require active environmental cleanup actions by the department, or if they are sufficiently cleaned up by natural attenuation such that only periodic monitoring of installed groundwater monitoring wells would be required to document attainment of cleanup standards through natural attenuation.

All program remediation costs in the following tables include those costs associated with remediation of not only the source sites, but also all affected third party locations contaminated by the LAUST release site(s).

TABLE 5 on the next page summarizes LAUST subsurface investigation costs incurred to the program.

**TABLE 5
LAUST SUBSURFACE INVESTIGATION ACTIONS**

PROJECT LOCATION	SITES	CONTRACT COST	SSI COST/SITE
Pinedale	7	\$129,123	\$18,446
Rock Springs, N. Elk St.	14	\$228,834	\$16,345
Rock Springs, Pilot Butte	20	\$268,585	\$13,429
Sheridan	11	\$86,284	\$7,844
Opal	1	\$42,069	\$42,069
Sundance	5	\$47,491	\$9,498
Green River	14	\$95,280	\$6,806
Greybull/Basin	14	\$128,978	\$9,213
Glenrock/Douglas	6	\$75,449	\$12,575
Buffalo	11	\$143,393	\$13,036
Tie Siding	1	\$38,765	\$38,765
South Sheridan	13	\$104,316	\$8,024
Weston County *	19	\$74,392	\$3,915
Southwest Cheyenne	32	\$121,675	\$3,802
Upper Platte Valley **	26	\$202,598	\$7,792
Jackson	34	\$312,330	\$9,186
West Casper	35	\$150,480	\$4,299
North Modified	74	\$245,746	\$3,321
South Modified	79	\$339,277	\$4,295
Teton County	6	\$174,960	\$29,160
Baggs	3	\$53,691	\$17,897
Lyman/Mt. View	20	\$204,823	\$10,241
TOTAL	445	\$3,268,539	
AVERAGE COST/SITE		\$7,345	

* Includes the towns of Newcastle, Upton, and Mule Creek Junction.

** Includes the towns of Saratoga, Encampment, Riverside, Hanna, Elk Mountain, and Medicine Bow.

Remediation design projects have been initiated at contaminated LAUST sites, as presented in TABLE 6 .

TABLE 6
LAUST REMEDIATION, PHASE I, ENGINEERING DESIGN PROJECTS

PROJECT LOCATION	SITES	DESIGN COST	COST/SITE
Pinedale	7	\$932,992	\$133,285
Casper Flying J	1	\$79,256	\$79,256
Riverton	7	\$496,476	\$70,925
West Laramie	5	\$726,224	\$145,245
Laramie (Third St)	31	\$923,811	\$29,800
Opal	2	\$248,786	\$124,393
Sundance	7	\$327,123	\$46,732
Green River	16	\$909,272	\$56,830
Table Rock	1	\$220,980	\$220,980
Greybull/Basin	17	\$575,555	\$33,856
Powell	22	\$647,788	\$29,445
Rock Springs (N. Elk St)	16	\$633,651	\$39,603
Worland	14	\$517,787	\$36,985
Ft. Bridger	1	\$314,485	\$314,485
Niobrara County	4	\$268,340	\$67,085
Sheridan	17	\$1,614,379	\$94,963
Southwest Cheyenne	28	\$913,873	\$32,638
Jackson	18	\$816,672	\$45,371
West Casper	15	\$644,689	\$42,979
Buffalo	5	\$535,132	\$107,026
TOTALS	234	\$12,347,271	
AVERAGE COST/SITE		\$52,766	

TABLE 7 presents information concerning LAUST remediation engineering Phase II, System Construction and Design Engineer Construction Oversight Administration. The construction phase includes the costs associated with the purchase of the actual LAUST remediation equipment/enclosures, installation of that equipment, and costs for the Phase I design firm to oversee and represent the department during construction work.

**TABLE 7
LAUST REMEDIATION SYSTEM CONSTRUCTION PROJECTS**

PROJECT LOCATION	SITES	CONSTRUCTION CONTRACT COSTS		TOTAL COST
		CONSTRUCTION Contract	ENGINEER Oversight	
Pinedale	7	\$2,928,538	\$901,622	\$3,830,160
Casper Flying J	1	\$189,206	\$103,399	\$292,605
Riverton	7	\$1,490,474	\$353,071	\$1,843,545
West Laramie	5	\$1,755,156	\$599,323	\$2,354,479
Opal	2	\$675,526	\$323,005	\$998,531
Laramie, Third Street	31	\$2,810,750	\$647,964	\$3,458,714
Sundance	7	\$936,195	\$298,786	\$1,234,981
Green River	16	\$569,322	\$674,869	\$1,244,191
Greybull/Basin	17	\$1,886,458	\$634,617	\$2,521,075
Powell I & II	22	\$1,804,054	\$984,753	\$2,788,807
Niobrara County	4	\$139,833	\$278,193	\$418,026
Rock Springs, Elk St	16	\$2,136,798	\$594,538	\$2,731,336
Worland	14	\$2,300,127	\$449,967	\$2,750,094
Sheridan	6	\$1,385,926	\$313,274	\$1,699,200
Buffalo	5*	\$486,292	\$273,968	\$760,260
SW Cheyenne	28	\$1,446,173	\$670,285	\$2,116,458
Jackson	18	\$1,263,004	\$815,283	\$2,078,287
TOTALS	195	\$22,331,614	\$8,329,675	\$30,661,289
Average Cost per Site		\$114,521	\$42,716	\$157,237

- Includes only partial data for the Buffalo project due to contractual time frames. Because data for Buffalo is not complete, the Buffalo costs have not been used in the Construction Phase Totals or Average Cost Per Site calculations.

TABLE 8 tabulates the current annual LAUST remediation Operation & Maintenance costs for operating and maintaining constructed LAUST remediation treatment systems until acceptable WDEQ remediation standards have been achieved in soil and/or groundwater.

TABLE 8
ANNUAL LAUST REMEDIATION OPERATION & MAINTENANCE PROJECTS COSTS

PROJECT LOCATION	SITES	OPERATION & MAINTENANCE COSTS					ANNUAL O&M COST
		Contract	Engineer	Electrical	Fuel	Other ⁺	
Pinedale	7	\$99,496	\$91,750	\$48,740	\$30,200	\$5,200	\$275,386
Casper Flying J	1	\$0	\$54,293	\$5,230	\$36	\$0	\$59,559
Riverton	7	\$44,950	\$47,000	\$41,230	\$0	\$6,110	\$139,290
West Laramie	5	\$74,550	\$56,000	\$35,600	\$2,250	\$5,400	\$173,800
Laramie, Third St.	31	\$234,650	\$107,800	\$66,800	\$7,950	\$0	\$417,200
Opal	2	\$28,400	\$30,500	\$19,500	\$0	\$0	\$78,400
Sundance	7	\$35,350	\$18,100	\$19,200	\$0	\$1,235	\$73,885
Green River	16	\$68,850	\$64,200	\$26,610	\$0	\$3,290	\$162,950
Greybull/Basin	21	\$76,200	\$61,400	\$34,300	\$850	\$39,120	\$211,870
Powell I & II	22	\$102,800	\$35,500	\$47,750	\$570	\$6,950	\$193,570
Kemmerer IR	1	\$0	\$29,500	\$1,025	\$0	\$160	\$30,685
Niobrara County	4	\$21,600	\$33,300	\$4,350	\$0	\$315	\$59,565
Rock Springs, Elk	16	\$192,200	\$120,000	\$29,200	\$0	\$0	\$341,400
Worland	14	\$99,800	\$40,900	\$26,250	\$4,770	\$2,500	\$174,220
TOTALS	154	\$1,078,846	\$790,243	\$405,785	\$46,626	\$70,280	\$2,391,780
Average Annual Cost per Site for O&M Projects	154	\$7,005	\$5,131	\$2,635	\$303	\$456	\$15,531
Average Annual Cost for 14 O&M Projects	14	\$77,060	\$56,446	\$28,985	\$3,330	\$5,020	\$170,841

* Includes additional costs for water/sewer connections and/or telephone lines for data transmission.

III. State Revolving Loan (SRF) Account Activities. The SRF program has prepared an Intended Use Plan (IUP) for accomplishing LAUST subsurface investigations, LAUST remediation actions, and municipal wastewater treatment system improvement projects in Wyoming for calendar year 2000. This document was the subject of the public hearing process, and is being implemented in accordance with the quarterly schedule identified in the IUP.

TABLE 9 presents a summary of the various LAUST/SRF fund cumulative balances on 12 December 2000.

**TABLE 9
LAUST PROGRAM SRF FUND BALANCES**

FUNDING SOURCE	ACCOUNT BALANCE
State Corrective Action Account	\$6,006,583
State Financial Responsibility Account	\$1,000,000
State Revolving Loan Fund (SRF)	\$4,358,618
Available for Remediation LAUST Projects	\$10,365,201
Available for LAUST Third Party Damages	\$1,000,000

Table 10 summarizes the total activity of the SRF funding account since it was initiated.

**TABLE 10
LAUST PROGRAM SRF ACCOUNT ACTIVITY**

ACTIVITY	AMOUNT
Loan Authority Available to LAUST Program	\$68,212,116
Loan Authority Encumbered to LAUST Projects	\$8,460,925
Loan Amounts Disbursed to LAUST Projects	\$48,036,664
SRF Loans Paid	\$44,724,885
SRF Loans Payable	\$3,311,779

SECTION D MAJOR ACCOMPLISHMENTS FOR 2000

I. Summary. The department LAUST remediation program has been actively cleaning up contaminated sites since 1993. During each year, the program has initiated aggressive environmental restoration actions at the highest priority sites within each district office using resources available to the program. Although the reporting and/or discovery of new sites has now ceased altogether except for a few rare instances of releases on un-contaminated sites, work in this program will continue for years. Cleanup on the remaining sites is projected to last at least an additional twenty-five years with current resources. The major accomplishments for 2000 include:

- Wyoming owners/operators achieved almost 100% compliance with both the 1988 upgrade requirements on their systems and also with the requirement to perform a minimum site assessment (MSA). During 2000, a few instances were found of non-upgraded tanks and enforcement action was accomplished on each of them. While there are still a few tanks which have not performed a required MSA and have not fully upgraded, none of these tank systems is in operation today. Removal of these few remaining non-upgraded tanks will take place over the next couple of years.
- The compliance section completed upgrading of the computer system to track compliance with all operational testing requirements. With this upgrade, Wyoming is one of the few states, possibly the only state, that is tracking the due dates for every test required on every active tank in the state. This has resulted in a very high degree of compliance with cathodic protection test requirements, line pressure test requirements, automatic line leak detector tests, and compliance with monitoring requirements on the tanks themselves. Using a very liberal definition of compliance, namely that the database records tests which are not more than one year out of date, Wyoming presently has approximately 93% compliance with all required test work. We are working to bring this number up to at least 95% compliance and to use a definition that test work has been done on time.
- Compliance inspections are now being focused on those systems with known compliance problems rather than on performing large numbers of inspections. While inspections are an important part of the program, as some inspections will always be done at random, inspections at sites where test work is known to be in arrears appears to be more effective.
- Initiation of two contracts to accomplish 153 North and South Modified Subsurface Investigations (SSI) to evaluate lower priority contaminated sites (priority scores <400). The purpose of these Modified SSIs is to determine which of these lower priority contaminated sites have achieved acceptable state standards by natural biological attenuation mechanisms and those contaminated sites which will require additional active treatment to achieve state soil and/or groundwater standards. These results should be available at project completion dates in spring 2001.
- Continuing aggressive environmental remediation project management for 2001 includes 26 active LAUST cleanup projects (415 contaminated sites, including the 153 sites in the Modified Subsurface Investigation projects), initiation of 5 new cleanup projects involving another 70 contaminated sites, and one immediate

response in Hulett to accomplish release stabilization.

- Extensive re-writing of department LAUST remediation program contract language was also accomplished during 2000. The purpose of this action was to incorporate revised program procedures and to standardize the general contract language with recent changes implemented by the Wyoming Attorney General Office Contract Manual. This work has resulted in increased contract administration and efficiency.
- The groundwork has been laid to begin the rule-making process of regulations for above ground storage tanks and revising the existing Chapter 17 regulations for underground storage tanks during 2001. Now that the 1998 UST tank upgrade deadline has come and gone, many UST rules can be consolidated and re-written to be understood more easily. Extensive effort has been expended to find out how other states regulate above ground tanks and to determine the best format for drafting AST rules.