

Phase One Environmental Assessment

**DQ University
33250 County Road 31
Davis, CA 95616**

Prepared for: Paul M. Lively
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Property: Yolo County Assessor's Map,
Book 38, Page 11, Parcel 11

Date inspected: September 17, 2003
October 8, 2003
November 3, 2003
December 1, 2003
January 20, 2004

Date of report: January 30, 2004

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Scope

Paul M. Lively, Director Physical Plant, for DQ University, P.O. Box 409, Davis, CA 95616, has engaged Richard S. Holdstock, R.E.A., to inspect the property at 33250 County Road 31, Davis, CA 95616 and produce a Phase 1 Environmental Assessment Report. The report is to determine if there is evidence of on-site liabilities associated with past or current practices involving the use or disposal of hazardous materials or substances on the site.

Property Description

Property:	DQ University, 33250 County Road 31 Davis, CA 95616
Location:	The property is located on County Road 31 between County Roads 95 and 92e (Attachment 1)
Assessor's Map	Yolo County Assessor's Map, Book 38, Page 11, Parcel 11 (Attachment 2)
Owner:	Deganawidah-Quetzelcoatl University P.O. Box 409, Davis, CA 95616 (Attachment 3)
Size:	Approximately 634.75 acres
Use:	The subject property is the campus of DQ University.

History

In 1952, the United States Department of the Army acquired a square mile of agricultural land for the Sacramento Valley Radio Transmitter Station. During Army occupation, six buildings, power generating equipment, subsurface disposal systems, large underground fuel storage tanks, waste water lagoons, and water wells were constructed.

In 1970, the Army vacated the site, which then became federal surplus property placed under the jurisdiction of the Department of Health, Education and Welfare. At this time a number of Native Americans and Chicanos established a claim on the site with the intent of forming a school controlled by indigenous peoples. After lengthy negotiations, the federal government awarded DQ

University title to the land in 1971, under provisions of the federal surplus property laws.

Native peoples gained the first and only indigenous-controlled institution of higher learning located outside a reservation in July 1971, when DQ University opened its doors for the first classes. It also represented the first time that the diverse groups of Native races on the American continent successfully worked together on a project, despite vast language barriers, geographical differences and outside pressures. On November 4, 1978, D-Q University became Indian-controlled. The campus property continued to remain in trust until April 2, 2001, when the property was turned over to the board of trustees.

US Army Corps of Engineers Activities at DQ University

Most of the information for this section of the report was obtained by reviewing a document produced by U.S. Army Corps of Engineers (USACE) dated August 2002, entitled: "Preliminary Assessment Draft Final, D-Q University, Yolo County, California." Copies of the document are located at DQU, USACE, and at California Regional Water Quality Control Board Central Valley Region (RWQCB). **Attachment 4** is a table from the August 202 USACE report that summarizes previous Investigation and removal actions for areas of concern at DQU.

In 1992 the USACE began assessment of on-site liabilities associated with past or current practices involving the use or disposal of hazardous materials or substances on the site. As part of the 1992 assessment, USACE contracted with Dynamac Corporation to prepare an inventory of potential areas of environmental concern. The inventory identified six underground storage tanks (UST's), multiple electrical transformers, two wastewater oxidation lagoons, a cooling water well and two cooling-water injection wells that required further

investigation and remediation. Additionally two incinerators, two piles of waste oil and paint barrels, and a waste disposal pipe to an irrigation ditch were identified as potential environmental hazards.

Six leaking underground fuel storage tanks were removed in 1995. Subsequent testing of groundwater has revealed the presence of a plume of petroleum hydrocarbons, including trichloroethelene (TCE). Additional groundwater testing by USACE is needed to characterize the extent of the contamination. In a letter dated November 4, 2002 the RWQCB stated that they were “concerned over the slow progress the Army Corps is making characterizing and remediating the pollution at DQU.” **(Attachment 5)**

A permit was issued by Yolo County Department of Health (YCDH) to PC Exploration to abandon a 285 feet deep injection well at DQU by back filling and pressure grouting on September 21, 1995 **(Attachment 6)**. YCDH also issued to Soils Exploration Services a permit on August 13, 1997 **(Attachment 7)** to abandon a 515 feet deep well by the TDA method. The permits do not reveal if YCHD or USACE representatives visited the site during the abandonments. USACE records appear to indicate that the water in the abandoned injection well was not sampled before abandonment. Diesel range contamination was found in the water from the deep cooling water well but USACE believes that this may have been from the water pump that was accidentally dropped in the well during the abandonment procedure. Since all three of the cooling system wells were near the area currently being studied for the extent of groundwater contamination, and since they communicate with the deeper groundwater aquifer, RWQCB on November 4, 2002 asked USACE to immediately sample the remaining well for the presence of TCE. As of the date of this report, this testing was not completed.

Hazardous waste manifest number 92826221 (**Attachment 8**) dated September 7, 1995 listed nine, drained, polychlorinated biphenyl (PCB) contaminated transformers and one drum of oil containing 2.4 PPM of PCB. The waste was shipped from DQU to Madison South Dakota, where the PCB's were destroyed by incineration (**Attachment 9**). This shipment was for the removal of PCB containing transformers from the site. USACE reports one other transformer was removed from the site in 1997. The August 2002 USACE report says: "Further site investigation is necessary to determine the extent of contamination, if any, caused by transformer operation at the DQU University site. A closure report and supporting documentation needs to be located or generated for complete area closure".

USACE recently arranged with SCA Environmental, Inc. to characterize and remove a number of drums containing hazardous waste from DQU. As of January 20, 2004 the drums had not been removed. Kenneth Conner of SCA reported that he doesn't think the waste company will need to have the waste oil barrels tested for PCB.

In 1995 USACE arranged for the removal of two on site incinerators. USACE indicates that additional testing is needed to determine if residual contamination exists from the prior use of the removed incinerators.

The August 2002 report of USACE recommends that soils testing be done in the ditch where it appears waste fuels and solvents appear to have been discharged from Building100.

Adjacent Property

South of the property is County Road 31. During the time of the inspection a rig appeared to be drilling for oil or gas in the field south of County Road 31.

All land immediately adjacent to DQU on the West, North, and East is currently cultivated for agriculture.

Visual Inspections

Visual inspections of DQU were made on September 17, 2003, November 3, 2003, December 1, 2003, and January 20, 2004.

Most of what was described in the 2002 USACE Preliminary Assessment was confirmed during the site inspections. The following are site investigation findings not included in the August 2002 USACE Report:

- A water well, believed to be more than 500 feet deep, used for fire protection and irrigation, is located within the pumphouse shown on the Site Map as building 107 (**Attachment 10**). This well is adjacent to the site where a 100-gallon underground gasoline storage tank was removed and is less than 150 feet from the diesel fuel and TCE plume.
- Building 101 has a series of floor troughs that appear to drain into a sump located in the rear corner of a room near the center of the east side of the front portion of the building. The sump appears to have been designed to collect drainage from work performed on mechanical equipment in that portion of the building. Some plumbing remains from a system that may have been used to pump out the contents of the sump. The sump and abandoned plumbing in the corner of building 101 appears to leave the building approximately 100 feet from the pump house. Where the sump originally drained was not determined during this assessment.
- There was standing water throughout the basement of building 100 on November 3, 2003. Pipes were observed with lagging that may contain asbestos.
- Two electrical transformers remain on site and appear to be used by DQU. One is located on a pad north of building 107, and the other is on a pad south of building 102. Both pads appear to have held additional transformers in the past and show evidence of what might be spilled oil. Both pads are not secured and are easily accessible to the public.
- On September 17, 2003, twelve burrowing owls were observed nesting at approximately 300 feet from the rear gate on the West Side of the dirt road leading from the central campus to the ceremonial grounds. Burrowing owls are protected by California Fish and Game Code and by the Migratory Bird Treaty Act.

- On January 20, 2004 the amount of standing water in what is called Wastewater Oxidation Lagoon #1 (WOL #1) appeared to be very shallow and wastewater lagoon WOL #2 appeared to be dry. It appears to be feasible to arrange for the influent to WOL #1 to be diverted to WOL #2.
- A wet land area with flowing water, beaver dams, coyote droppings, many birds, and plants were observed within the DQU property near the eastern property line. It is possible that this watercourse is called Chickahominy Slough.
- Some floor tiles, pipe lagging and air handling equipment in the buildings appear to contain asbestos. No testing for asbestos was done as a part of this assessment.

Individual Interviews

Paul Lively, Director, Physical Plant DQU (530-758-0470 ext. 1030) provided copies of the August 2002 USACE report. He also advised that that the DQU site floods every two years. Mr. Lively requested the completion of this report as part of the process of conversion of the existing storehouse building to a childcare center.

David Riesling, former chair of the DQU Board of Directors (530-756-7065) advised that several times during the time that DQU has existed the site has been flooded. Mr. Riesling was aware of the August 2002 UACE report, but not of the amount of work needed to resolve the remaining environmental issues

Jim Lamenti, Director of Funded Projects at DQU (530-758-0470) said he is aware of the August 2002 UACE report but not of the amount of the remaining work needed to resolve the environmental issues. He introduced me to David Childress.

David Childress is Manager of Information Systems at DQU (530-758-0470 ext. 1025) and has worked at DQU for over eighteen years. Mr Childress believes that there are currently four wells on the DQU property. There is a 500+ foot deep well at building 107, a 200+ foot deep well near the Ceremonial Grounds, injection well No. 1, and another well located somewhere north of the center of the west side of the DQU property. Mr. Childress believes the later well is stubbed off and not in use. He is of the impression that the two wells currently in use have been tested and found to be potable, but he doesn't know where the testing records are. He was not aware that the chemical tests currently required by Yolo County Health Department are past due.

Several years ago DQU acquired a grant to survey the presence of asbestos containing building materials, and electrical equipment containing PCB's. The

survey was completed, some pipe lagging and some PCB containing fluorescent light ballasts were removed, but the grant was not sufficient to abate all of the findings. Mr. Childress will seek copies of the report on the completed work to determine what additional asbestos containing building materials are left to be abated.

Kenneth Conner PE, of SCA Environmental Inc. (510-645-6236 ext. 412) is Senior Project Manager for SCA activities at DQU. He advised that TCE findings at DQU appear to be in the upper 20 feet deep aquifer. Further study is needed to delineate its presence at other levels. He is arranging for the removal of many containers of waste chemicals. He does not think it will be necessary to determine if the waste oil drums contain PCB.

Governmental Agency Contacts

Meegan G. Nagy, PE (918-557-7257) of the Sacramento Office of USACE was recently appointed as DQU project manager. An email of November 19 2003 from Ms. Nagy reported, in part, the following:

1. PCB's were contained within the transformers near Building 107 (which is east of Building 101). No testing besides the liquid within the transformers has been conducted to date. No sampling results are available for the transformer area south of Building 102.
2. It is recommended that the site south of Building 102 be investigated when a site inspection is conducted. There is no evidence of spillage in the location of the 3 transformers that were removed east of Building 101. No sampling is anticipated at this location.
3. The historical research shows that the water placed in the injection wells would not have come into contact with PCB's. There is no reason to suspect PCB's in groundwater.
4. We have not collected any records that would indicate the possibility of a release in Building 101. If you have obtained such information, we would appreciate any information you have collected. At this time, no investigation is anticipated in association with Building 101.
5. The water (in Injection well No. 1) could be tested as part of the long term monitoring or the SI as funds are available. The well would be sampled for volatile organics, as this is the chemical of concern in this area.
6. USACE does not plan to sample the domestic well. It is unlikely that the domestic well has been impacted due to Army activities. The well is located far from the buildings where Army activities took place. In addition, according to our monitoring of the area East of Building 100, the gradient is very flat indicating little movement of groundwater.
7. Removal of asbestos building material is considered ineligible under the FUDS program. It would be the responsibility of the property owner.

In an email dated January 29, 2004 Ms. Nagy provided further clarification of USACE plans for further activities at DQU as follows:

1. I don't think my original response properly conveyed my intent. I realize that building 101 was a power generation building and housed AST's and a maintenance area within the building. However, I have not found evidence of any reason for PCBs to be released in this building. The AST's have been removed and there should no longer be any oil issues related to this site. It appears that D-Q has used this building for repair (or rebuilding) of automobiles. This means that similar chemicals were likely used by D-Q in this building. We cannot investigate areas which were beneficially reused in a similar manner (or at least with similar chemicals) because we may not be able to identify the originator of the contamination. If a regulatory agency has reason to believe an investigation is necessary, they will direct the property owner to take action. If the property owner feels the government has a liability associated with any contamination that is found, they have the right to file a tort claim.

2. Since the last email, our technical team has visited the site and realized that there is a pump in this well (Injection well 1). We would likely need a crane to remove the pump to be able to do this sampling. This would be very costly. We will not be sampling the well but we took the time to research the well construction. It appears that it is sealed to 40' bgs. This should be a sufficient depth to eliminate a path to the lower aquifer. We will be providing the RWQCB a copy of the Draft Final work plan for additional sampling near the TCE plume, one transformer location, a drum storage location and one former UST. This will not include any sampling of the injection well. In addition, I have found that we are not authorized to close the injection well since it has been beneficially reused by D-Q. If you would like a copy of the draft final work plan, please let me know, and we will send you one when it is ready for distribution.

3. No (will not sample a 500 feet deep water well located in building 107 and close to where a 100 Gallon gasoline UST was removed, and less that 200 feet from the plume north of building 101). During removal of the 100 gallon UST, we tested soils to determine if the tank had leaked. All petroleum and BTEX results were non-detectable. Because of this, there is no reason to sample groundwater in this location. According to our quarterly sampling results, well #2 (which is closest to the well in building 107 and is located ~150 ft from building 107) is the southern most extent of the TCE plume, with TCE concentrations below the MCLs. In addition, all TCE has been found in the upper aquifer (~20 feet bgs).

James L.L. Barton, Engineering Geologist CRWQCB (916-464-4615) advised that he was reassigned to another unit in December 2002 since writing the November 4, 2002 letter (**Attachment 5**) that asked USACE to immediately

sample the remaining well for the presence of TCE. He said Brian Taylor is currently working on this project.

Brian Taylor, of RWQCB (916-464-4811) was asked if USACE had responded to the RWQCB notice of November 2002, for USACE to provide comments on the draft MRP by 15 December 2002, and to provide an injection well sampling and decommissioning work plan and schedule by 1 January 2003. He responded that he met with Meegan Nagy on Jan 12, 2004. She said that the Workplan will be submitted by 1 February 2004.

Yvonne Sasso, Registered Environmental Health Specialist YCHD (530-666-8646) advised that DQU is past due on submission of the required water quality tests for the onsite domestic water.

Wayne Taniguchi, is the General Environmental Health Unit Supervisor of YCHD. Mr. Taniguchi said permits issued for abandonment of wells in Yolo County do not always result in inspections or observations of the abandonment by YCHD staff members.

Documents Reviewed

“EDR Radius Map with Geo Check” dated October 6, 2003 was obtained. The report lists the following environmental concerns:

- Shipments of 0.5421 tons of alkaline metal solution wastes (pH.12.5), 0.5500 tons of inorganic solid waste, and 0.0150 tons of organic solid waste by USACE.
- Record of leaking underground storage tanks on the Hazardous Waste and Substances Sites List (Cortese –LUST). Believed to be affecting the aquifer by the State Water Resources Control Board.
- Describes the registration of the removal of 6 underground storage tanks.

Additionally the report identifies water wells within a mile of the site, three separate wetlands, and location of the 100-year flood zone. Relevant portions of the EDR report are included as **Attachment 11**.

“Preliminary Assessment Draft Final D-Q University Yolo County”; dated August 2002 prepared by USACE was reviewed. Portions of the report are described on page 3 through 5 above. **Attachment 12** is a table that summarizes the status of the areas of environmental concern to the USACE as of August 2002.

“Hazardous Waste and Leaky Underground Storage Tank Case List” the current list includes the following information:

- “• **D Q UNIVERSITY** HM 110 B Open FILE B - SEE ALSO FILE RU2581 FOR ADDITIONAL INFORMATION. November 2002 the CVRWQCB issued a Draft Monitoring and Reporting Program due to the slow progress of the 33250 CR 31 Davis Hydrocarbons/Chlorinated Solute investigation.

- **D Q UNIVERSITY** HM 110 A Open SIX UNPERMITTED UST WITH POSSIBLE DIESEL CONTAMINATION & OTHER ENVIRONMENTAL PROBLEMS TO BE ADDRESSED BY U S ARMY CORP OF ENGINEERS AT CR 31, One Mi W Of CR Davis Hydrocarbons/PCB THIS FORMER MILITARY FACILITY.95.”

“Draft Report Groundwater Site Investigation DQ University” produced by SCA Environmental, Inc. is dated February 8, 2000. **Attachment 13** includes the four recommendations from page 11 of the report.

Conclusions

Assessment of DQ University located at 33250 County Road 31 Davis, CA 95616, reveals that there is evidence of on-site liabilities associated with past practices involving the use or disposal of hazardous materials or substances on the site. DQ University activities do not appear to create liabilities involving the use or disposal of hazardous materials or substances on the site.

It is recommended that a Phase 2 evaluation of the property be completed and that steps be taken to eliminate the potential environmental damage from any contamination found. The Phase 2 evaluation should include the following:

1. Further testing of the aquifer from which DQU and surrounding properties draw water to assure that contaminants including diesel fuel, TCE, PCB, and other hazardous chemicals used in the past by the Army at the site are not present. Testing should include at least injection well #1, the well in building 107, and the onsite well currently used for domestic water.
2. Evaluation of the disposition of probable diesel fuel, TCE, PCB, and other hazardous chemicals previously used by the Army in building 101. Evaluation should include at least a determination on where drainage from waste collection-troughs was released. These wastes may have been released to an as yet undetermined ground sump or perhaps the ditch to the north of the building in a similar fashion to the effluent from building 100. These wastes may have been discharged to WOL #1. It is appropriate to test the oxidation pond (WOL #1) for the presence of hazardous chemicals previously used by the Army at the site. There appears to be sufficient capacity in WOL #2 to temporarily divert the current effluent from the lift station while WOL #1 is being tested. The question of beneficial use of WOL #1 by DQU does not seem appropriate in as much as DQU does not appear to have used the same hazardous chemicals as the Army.
3. Determine if PCB contamination remains from the large number of PCB containing transformers used by the Army on the site. Testing for PCB should be done at least at those remaining pads where transformers were used, waste oil containing drums that are being characterized by SCA, and at sites where effluents from buildings 100 and 101 may have been deposited.
4. Complete the investigation of the plume of volatile organic chemicals on site. Testing should be consistently on time and completed as required by RWQCB.
5. Complete the characterization and removal of the identified hazardous wastes on the site. Previous projects for removal of transformers from the site found some transformers were devoid of cooling oils. It is possible that

oils containing PCB may be in the containers to be shipped that SCB is arranging to remove.

6. Determine if soils are contaminated in the areas where above ground fuel storage tanks that were and are currently used.
7. Determine if soils are contaminated in the two areas where incinerators were removed.

An asbestos survey of the buildings was not included in this assessment, however, it was determined that a survey of asbestos containing building materials was completed several years ago. It is appropriate for DQU to review the report to assure that recommendations of the report were completed. If asbestos containing materials remain an asbestos management plan should be implemented.

CERTIFICATION

I certify, that to the best of my knowledge and belief, the facts and data used in this inspection report are true and accurate, based on currently accepted and available information as of the inspection date. I personally inspected the subject property and have no undisclosed interest, present or prospective, therein.

January 30, 2004

Richard S. Holdstock R.E.A. 1858

Attachment 1 Location Map 33250 County Road 31, Davis California

Attachment 2 Yolo County Assessor's Map, Bk 38, Page11, Parcel 11

Attachment 3 Quitclaim Deed for DQ University

Attachment 3 Quitclaim Deed for DQ University (continued)

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Attachment 4 August 2002 Summary of USACE Action at DQU (continued)

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