

FACILITY STATUS CHANGE FORM

1226889

[409110185]

Date Submitted: August 21, 2014 Originator: Chris Strand Phone: 554-2720	Area: 300 Area Facility ID: 342, 342A, 342B, 342C Action Memorandum: Action Memorandum #1	Control #: D4-300-098
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This form documents agreement among the parties listed below on the status of the facility D&D operations and the disposition of underlying soil in accordance with the applicable regulatory decision documents.

Section 1: Facility Status

- All D4 operations required by action memo complete.
- D4 operations required by action memo partially complete, remaining operations deferred.

Description of Completed Activities and Current Conditions:

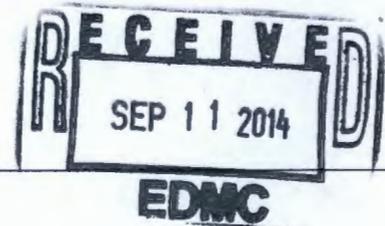
Deactivation: Utility isolations were performed on the facility prior to beginning facility decontamination.

The following hazardous materials were removed prior to facility demolition: batteries, Freon, oil, light ballasts, filters and miscellaneous construction materials. Hazardous material removal and waste disposition was performed in accordance with *Removal Action Work for 300 Area Facilities, DOE/RL-2004-77, Revision 2 (RAWP)*.

Demolition: Above-grade demolition of the 342 facilities were completed in August of 2014. Below-grade demolition of the 342A, 342B, and 342C foundations were completed in September 2014. The 342 Collection Sump foundation walls to 3 feet below grade was completed in September of 2014. The above-grade building debris were removed and disposed of at ERDF. The 342 Collection Sump was cleaned of remaining sediment and the basement walls and floor slab were left following EPA approval (Reference Attachment 4). Process sewer piping entering and exiting the facilities were removed to the excavation layback. The demolition was performed under Radiological and Industrial Hygiene controls.

Description of Deferral (as applicable):

None.



Section 2: Underlying Soil Status

- No waste site(s) present. No additional actions anticipated.
- Documented waste site(s) present. Cleanup and closeout to be addressed under Record of Decision.
- Potential waste site discovered during D4 operations. Waste site identification number <to be> assigned. Cleanup and closeout to be addressed under Record of Decision.

Description of Current/As-Left Conditions:

The 342 Collection Sump walls were removed to 3 feet below-grade, with the remaining portion of the structure backfilled in place. GPERs surveys are included as attachment 3. The excavation was evaluated before backfill, no anomalies noted. No postings remain following backfill and site completion.

Identification of Documented Waste Site(s) or Nature of Potential Waste Site Discovery (as applicable):

300-15, Process Sewer - piping was removed to the limits of the excavation layback, but segments remain in the area.

Section 3: List of Attachments

1. Facility information (building history, characterization and identification of documented waste sites).
2. Project photographs.

FACILITY STATUS CHANGE FORM

3. GPERs Surveys

4. EPA approval to leave the 342 Collection Sump wall and floor in place.

DOE-RL

Date

8/21/2014

Lead Regulator

EPA

Ecology

Date

9-4-2014

DISTRIBUTION:

EPA: Dennis Faulk, B1-46

Ecology: Rick Bond, H0-57

DOE: Rudy Guercia, A3-04

Document Control, H0-30

Administrative Record, H6-08 (300-FF-2 OU)

SIS Coordinator: Ben Cowin, H4-22

D4 EPL: Chris Strand, L5-45

Sample Design/Cleanup Verification: Theresa Howell, H4-23

FR Engineering: Eric Ison, L4-39

FR EPL: Chris Strand, L5-45

Attachment 1: Facility Information

Facility History:

The 342 Complex was built in 1993. The 342 collection sump collected process sewer waste from 300 Area facilities and pumped it to the 310 TEDF for treatment and disposal. In 2009, with the permanent shutdown of the 310 TEDF, the system was modified to send effluent to the 310 Retention Transfer System (RTS), and then to the City of Richland after confirming it met discharge acceptance criteria. The 342 Waste Collection Sump became part of the new system called the 310 RTS.

The 342 Complex consisted of the following buildings/facilities.

342 Collection Sump: The 342 Collection Sump consisted of an underground vault that measured 11.2 m by 4.9 m (36.7 by 16 ft.) inside and was approximately 5.8 m (19 ft.) deep. The sides and bottom of the sump are 46 cm (1.5 ft.) thick and coated with PS-18 epoxy. The vault had a single 41 cm (16 in) influent line connected to the northwest corner, and a ladder that extended down to the bottom. A set of three pumps were located at the bottom of the sump, near the southern wall of the structure.

342A Sump Control Room: The 342A building was a metal building with an insulated roof and concrete floor with a floor area of 16 sq. m (176 sq. ft.), measuring 3.7 by 5.7 m (12 by 18.7ft). It was designed as a Sump Control Room and was located directly over the 342 Collection Sump. Equipment originally located within the structure included a sampling pump, control panel, and transfer switch. A pump control cabinet and junction box were located up against the exterior of the building.

342B Transformer Pad: The 342B facility was a transformer pad that is located approximately 3m (10 ft.) north of the 342 Collection Sump. The concrete pad housed a single 75 kVa transformer along with a power vault. The transformer was removed in October 2011.

342C Generator Pad: The 342C generator pad was located about half a meter (1.5 ft.) north of the 342 Collection Sump. It supported a generator set inside a protective casing and a 1135 L (300 gallon) tank for storing fuel. The generator and fuel tank were removed in October 2011. (Reference D4-300-050).

Building Characterization:

Table 1 summarizes the industrial hygiene, radiological control, and asbestos samples collected in the 342 Complex.

Table 1. Summary of Characterization Surveys at the 342 Complex.

Type	Date	Documented In	Results Summary
Pre-Demolition			
Asbestos	June 6, 2014	CNN # 176245	No asbestos containing materials identified through inspection and testing.
IH Surveys and Beryllium Characterization	7/31/14	IHEA-342-24-001	Sediment sample data was above action levels for Be. The lower collection sump was a Be controlled area.
Radiological Surveys	April 22, 2014	RSR-300PS-14-1470	No radiological contamination identified.

Associated WIDs sites:

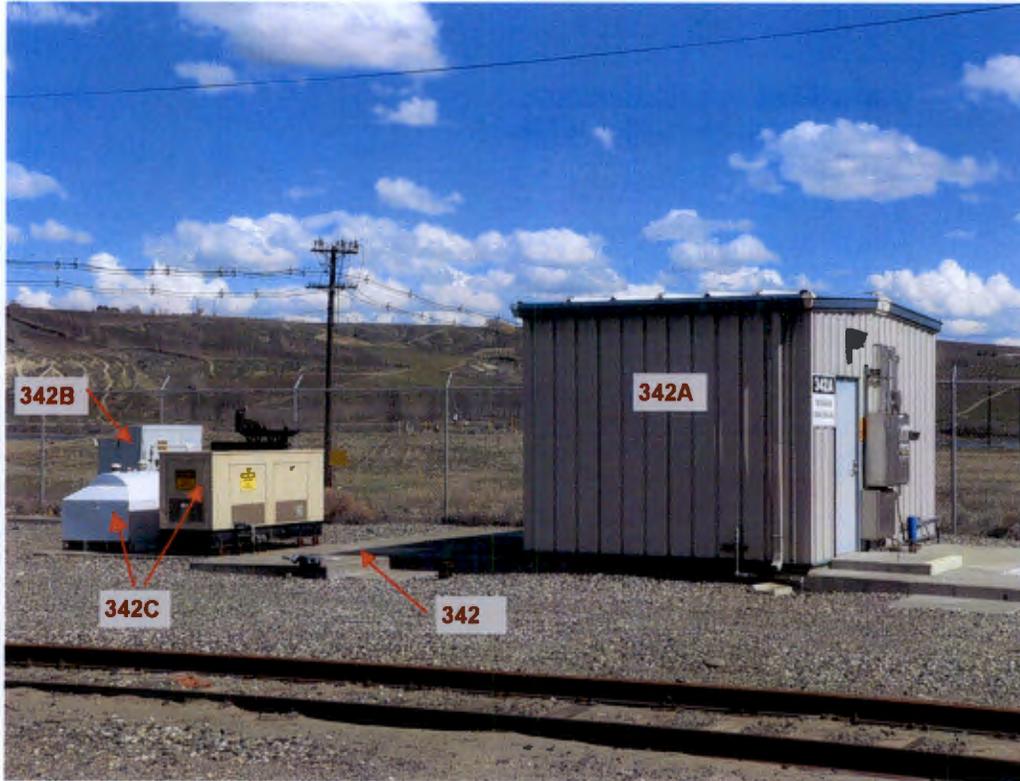
300-15: Process sewer was removed to the limits of the excavation layback.

Anomalies Discovered During Demolition.

No anomalies were discovered during the demolition of the 342 Complex. No soil staining was observed upon final inspection of the excavation prior to backfill.

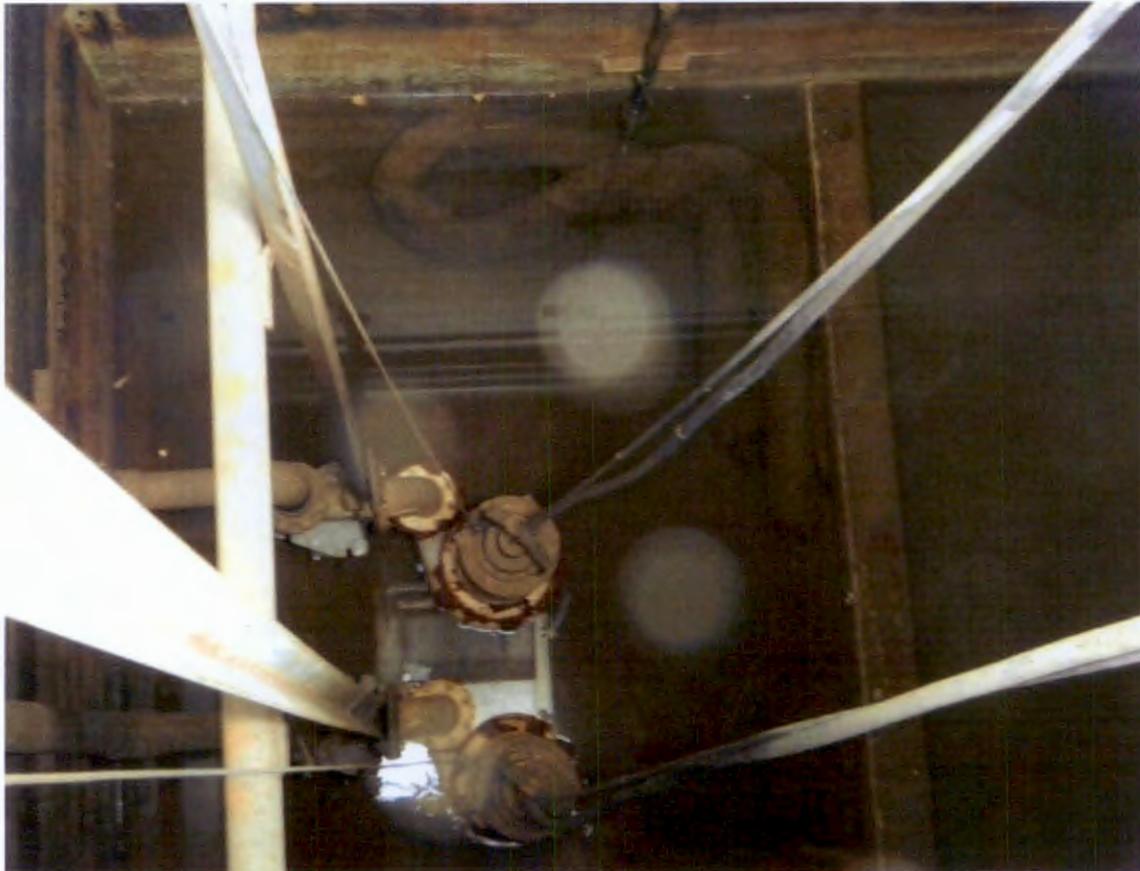
Attachment 2: Project Photographs

Photograph 1: The 342 Complex looking east, April 13, 2006.



342, 342A, 342B, 342C FACILITIES COMPLETION

**Photograph 2. 342 Collection Sump Following Deactivation, April 2014.
(The sump is shown holding residual water and sediment
following system shut-down)**



Photograph 3. 16 inch process sewer inlet piping, looking west on July 30, 2014.



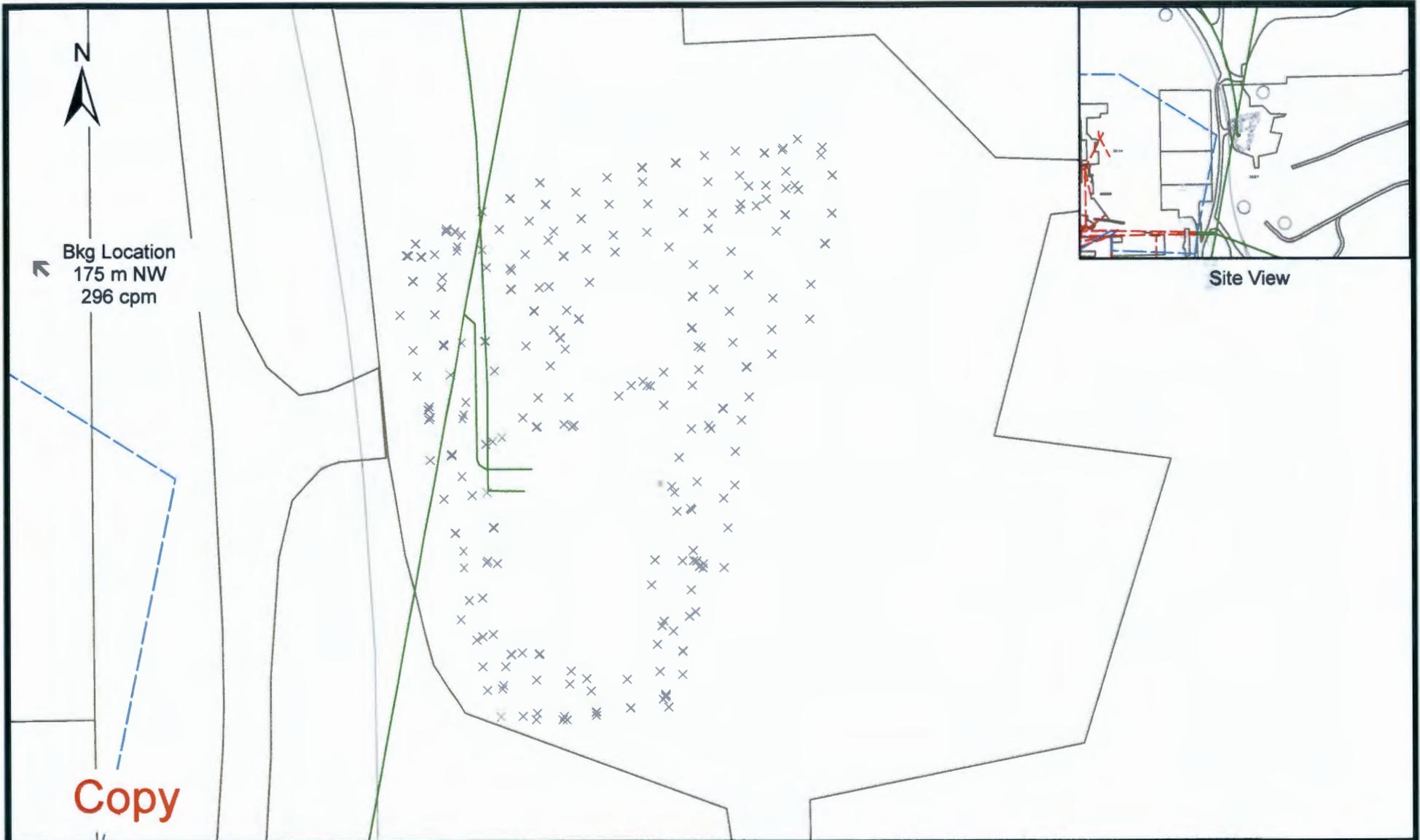
Photograph 4. 342 Below-grade demolition, looking southwest on August 12, 2014.



Photograph 4. 342 Complex following backfill, looking north on August 20, 2014.



**Attachment 3: GPERS Surveys
(Beta and Gamma)**



Legend	Summary Statistics
NET CPM	Coverage File: D4_226
× <444	Number of Data Pnts: 265
● 444 - 5000	Type of Survey: beta
● 5000 - 10000	Max GCPM: 524
● 10000 - 25000	Avg Bkg CPM: 296
● 25000	Survey Date: 8/14/2014
	Area Surveyed: 640 m ²
	Project File: ESRFRM140079B
	Pdf File: ESRFRM140079BC

300 D4
342 Excavation
GPERS Radiological Survey
Beta Track Map

0 2 4 6 8 10
 Meters

EBERLINE
 SERVICES

Survey Map Prepared By Bruce Coomer, ESI



Bkg Location
175 m NW
1513 cpm



Site View

Copy

Legend

- NET CPM
- × <2269
 - 2269 - 5000
 - 5000 - 10000
 - 10000 - 25000
 - 25000

Summary Statistics

Coverage File: D4_226
Number of Data Pnts: 3513
Type of Survey: gamma
Max GCPM: 2217
Avg Bkg CPM: 1513
Survey Date: 8/14/2014
Area Surveyed: 640 m²
Project File: ESRFRM140079G
Pdf File: ESRFRM140079GC

300 D4 342 Excavation GPERS Radiological Survey Gamma Track Map

0 2 4 6 8 10
Meters



Survey Map Prepared By Bruce Coomer, ESI

Attachment 4: 342 End-State Proposal

Strand, Christopher P

From: Simes, Benjamin <Simes.Benjamin@epa.gov>
Sent: Thursday, August 14, 2014 9:35 AM
To: Strand, Christopher P; Guercia, Rudolph F; Faulk, Dennis A
Subject: RE: 342 End-State Proposal

Rudy,

EPA has reviewed the modified *End-State Proposal for the 342 Collection Sump* at the Hanford Site. After reviewing the sediment sample data and the evidence of the structural integrity of the sump, EPA is in concurrence to leave the collection sump in place.

Thanks,

Benjamin Simes, CHMM
US EPA, OSWER
Federal Facilities Restoration and Reuse Office
703-603-0055 D
571-302-6189 C
703-603-0043 F

From: Strand, Christopher P [<mailto:Christopher.Strand@wch-rcc.com>]
Sent: Thursday, August 14, 2014 11:08 AM
To: Simes, Benjamin; Guercia, Rudolph F; Faulk, Dennis
Subject: RE: 342 End-State Proposal

Ben,

Following feedback from EPA, the 342 End-State Proposal (attached) has been modified as follows, and is being resubmitted for concurrence:

1. 342 Collection Sump Description section. A new sentence was added to the beginning of the third paragraph noting the sump held water and sediment following deactivation, supporting the structural integrity of the structure during operations.
2. A new figure 2 showing the sump holding residual water was added.
3. 342 Collection Sump End-State section. A new sentence was added to the end of the second paragraph documenting a visual inspection of the sump following demolition.

If you have any additional questions, please call.

Thank you,

Chris
554-2720

From: Strand, Christopher P
Sent: Monday, August 11, 2014 8:13 AM
To: 'Simes, Benjamin'; Guercia, Rudolph F; Faulk, Dennis A
Subject: 342 End-State Proposal

Ben,

Attached for EPA concurrence is an End-State proposal that documents DOE's desire to leave the below-grade portion of the 342 Collection Sump in place following demolition. This methodology is consistent with Sections 2.6 and 2.7 of the *Removal Action Work Plan for 300 Area Facilities*, DOE/RL-2004-77, Rev. 2. Should this proposal be acceptable to EPA, all pertinent information will be documented in a Facility Status Change Form provided for EPA and DOE signature.

If you have any questions or require any additional information, do not hesitate to contact me.

Thanks,

Chris

<< File: 342 End State.doc >>

END-STATE PROPOSAL FOR THE 342 COLLECTION SUMP

INTRODUCTION

This proposal has been developed to document the end-state of the 342 Collection Sump following demolition. The proposal also serves as basis to gain concurrence from the U.S. Environmental Protection Agency and U.S. Department of Energy, Richland Operation for "as left" conditions to be documented on a Facility Status Change Form (FSCF) in accordance with the *Removal Action Work Plan for 300 Area Facilities*, DOE/RL-2004-77, Rev. 2, Section 2.7.

342 COLLECTION SUMP DESCRIPTION

The 342 Collection Sump was part of the 342 Complex that included the 342A sump control room, the 342B transformer pad/power vault and the 342C generator pad. The facility was located in the northeastern portion of the 300 area. The facility was designed and operated to collect non-hazardous waste water from the 300 area and pump it to the 310 Treated Effluent Disposal Facility for treatment and subsequent discharge to the Columbia River. Water entering the 342 Waste Collection Sump was diverted from a 24 in process sewer line through a diversion manhole located northwest of the sump. The 342A sump control room also was used as an electrical and instrument shop.

The 342 Collection Sump consists of an underground vault that measures 11.2 m by 4.9 m (36.7 by 16 ft) inside and is approximately 5.8 m (19 ft) deep. The sides and bottom of the sump are 46 cm (1.5 ft) thick and coated with PS-18 (8-Quinolinol). The vault had a single 41 cm (16 in) influent line (since removed) connected to the northwest corner of the sump, and a ladder that extended down into the sump. A set of three pumps were located at the bottom in a sump, near the southern wall of the structure.

Prior to demolition, the 342 complex deactivated and characterized. The sump was observed to be holding water and sediment supporting the history of facility operations as never having a release as shown in Figure 2. This facility has been deactivated and undergone demolition. Radiological scoping surveys performed prior to demolition identified no radiological contamination. Samples of sump sediment contained within the vault were taken during facility characterization. Analytical results did identify low levels of chemical contaminants, but all were below 300-FF-2 final Record of Decision Table 4, Cleanup Levels for industrial, shallow zone direct exposure. No asbestos containing materials were identified following inspection. A 2006 photograph showing the 342 Complex is included as Figure 1.

342 COLLECTION SUMP END-STATE

Following deactivation and hazardous material removal, the above grade portion of the 342 Complex was demolished using standard industry techniques. Prior to demolition, all service utilities and piping systems were deactivated. All ancillary and miscellaneous peripheral equipment, etc. have been removed as part of above-grade demolition as well.

Following above-grade demolition, an excavator ramped down into the 342 Collection Sump vault from the northeast. The north wall of the vault was then breached and debris was removed with mechanical equipment. Following debris removal, the sediment on the vault floor was washed and pumped out into portable tanks, then solidified for disposal at the Environmental Restoration Disposal Facility. An excavator then removed residual solids as shown in Figure 3. Following cleanout of the sump, a visual inspection identified no cracks or other visible evidence structure that could have resulted in a release to the surrounding soil during operations.

The final configuration of the 342 Collection Sump will consist of remaining vault walls and floor with all piping having been removed to the limits of the excavation layback. The vault walls will be removed 2 to 3 feet below grade to facilitate backfill and meet Site Completion standards in Section 2.5 of the *Removal Action Work Plan for 300 Area Facilities*, DOE/RL-2004-77, Rev. 2. This configuration will be documented on a Facility Status Change Form provided to EPA and DOE for approval.

**Figure 1. 342 Complex looking north east, 2006.
(The 342 Waste Collection Sump vault lies directly beneath 342A)**



Figure 2. 342 Collection Sump Following Deactivation, April 2014.
(The sump is showing holding residual water and sediment following system shut-down)

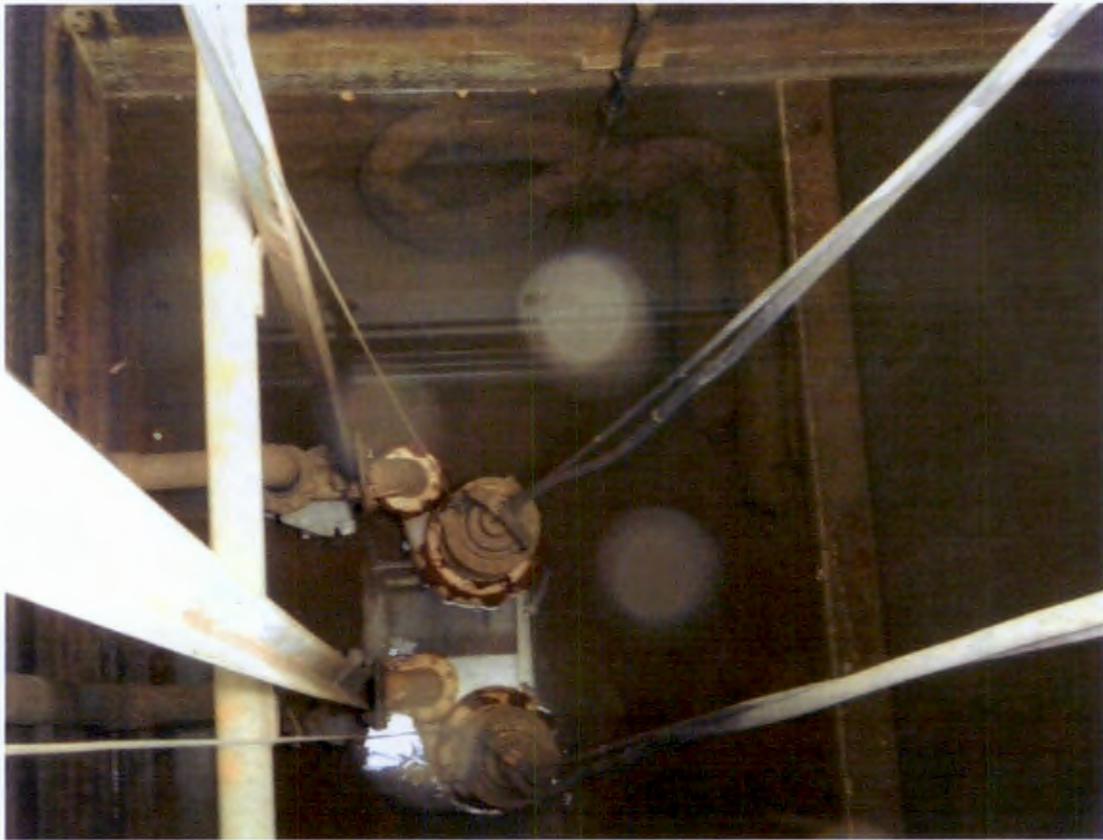


Figure 3. 342 Collection Sump vault floor, looking south, August 2014.

