

# FACILITY STATUS CHANGE FORM

1220365

<b>Date Submitted:</b> Feb 9, 2011 <b>Originator:</b> David Warren <b>Phone:</b> 539-6040	<b>Area:</b> 100-N Area <b>Facility ID:</b> See Description of Completed activities <b>Action Memorandum:</b> 100-N Ancillary Facilities	<b>Control #:</b> D4-100-N-0001 rev. 1
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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:**

This Facility Status Change Form (FSCF) presents previously submitted information, and additional information as necessary, that documents completion of D4 activities at Hanford Facilities 1515-N, 1516-N, 1517-N, 1518-N, 1519-N, 1331-N, 1332-N, and miscellaneous structures. The previously submitted information, "D4 Project Soils and/or Below Grade Structures Completion Form, Kaiser Shop Area" (Document Number D4-100N-0001) does not conform to a current project requirement that specifies "each completed form must be signed by the DOE-Richland Operations Office (RL) and lead regulator project manager." This FSCF contains those required signatures.

**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:**

See attachment 1: D4 Project Soils and/or Below Grade Structures Completion Form, Kaiser Shop Area

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

The WIDS number assigned to the discovery site (sandblasting area) was 100-N-81. See attachment 1: D4 Project Soils and/or Below Grade Structures Completion Form, Kaiser Shop Area.

**Section 3: List of Attachments**

- Attachment 1: D4 Project Soils and/or Below Grade Structures Completion Form, Kaiser Shop Area
- Attachment 2: Radiological Downposting surveys

Rudy Guercia DOE-RL Rick Bond Lead Regulator	Date <u>2/16/11</u> Date <u>3/1/11</u>
Lead Regulator <input type="checkbox"/> EPA <input checked="" type="checkbox"/> Ecology	



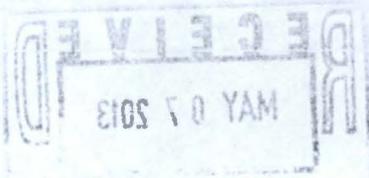
150882

# FACILITY STATUS CHANGE FORM

**DISTRIBUTION:**

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FR Engineering: Rich Carlson, N3-30  
FR EPL: Dan Saueressig, N3-30



100-N D4 Project Facility Completion Form

**Attachment 1**

## D4 Project Soils and/or Below Grade Structures Completion Form Kaiser Shop Area

<b>Date Submitted:</b> 3/15/06  <b>Originator:</b> J. W. Golden  <b>Phone:</b> 521-0877	<b>Associated Building/ Facility:</b> 1515N, 1516N, 1517N, 1518N, 1519N, 1331N, 1332N and one Miscellaneous Structure  <b>Associated Action Memorandum:</b> Action Memorandum 100N Ancillary Facilities	<b>Document Number:</b>  <u>D4-100N-0001</u>
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**This form, documents that the soil and/ or below grade structures meet the requirements of the Associated Action Memorandum.**

**Basis for Determination (attach pertinent documentation):**

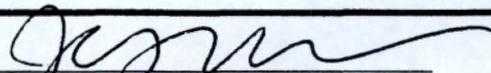
The D4 activities for facilities 1515N, 1516N, 1517N, 1518N, 1519N, 1331N, 1332N and one miscellaneous structure have been completed in accordance with the requirements of the action memorandum. The 8 facilities comprised what was known as the Kaiser Shop Area. There were no existing waste sites in the underlying soil associated with these facilities. However, one new WIDS site was created to address a newly discovered sand blasting area observed during the field. Sand blasting areas often exceed established cleanup levels for toxic metals. The new WIDS site created for the sandblasting area is 100-N-81. This new waste site will be addressed under the 100-NR-1/ NR-2 ROD.

With the exception of waste site 100-N-81, there were no indications that suggested the presence of additional waste sites in the underlying soil based, on documented project knowledge of the facility operation and data collected during the demolition of the facility. The basis for this determination is supported as follows:

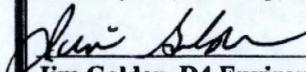
- The area was not a posted radiological area nor was the area previously identified within WIDS.
- Post demolition radiological surveys taken did locate one single "hit" that was 3 times the background levels, but subsequent surveys indicated that the "hit" was not valid.
- The facility did not manage dangerous waste.
- There were no documented spills of hazardous/ mixed waste.
- Final characterization summary report (attached) and process history.

**Additional items of interest:**

One new WIDS site was created to address previously un-identified contamination associated with grit blast materials. Interviews with personnel whom worked at/ near the site in the past indicated that the grit blasting on painted items had occurred in the past; this is evidenced by the large amount of "pink" colored soil in the area.

  
 \_\_\_\_\_  
 John Fulton, D4 Project Director

3-16-06  
 Date

  
 \_\_\_\_\_  
 Jim Golden, D4 Environmental Project Lead

3/14/04  
 Date

## ES/FR Data Transfer Checklist

- Reviewed Facility Operation and WIDS?  
Yes. New WIDS site has been identified to WIDS, but is not showing up.
- Reviewed Waste Data?  
NO. Profile data ~~was~~ is referenced in the post demolition summary report.
- Reviewed Rad Data?  
yes.
- Reviewed Sample Data?  
only rad surveying performed.
- Functional Review?  
NA
- GPS Data Provided?  
Attached to post demolition summary report.
- Items Discovered During Demolition Provided?  
yes. A new WIDS site was identified.
- Rad Survey Data Provided?  
yes... RSR references provided in post demolition summary report
- Waste Profile Numbers Provided?  
yes
- CVP Provided?  
NA
- OSR Provided?  
NA; This should <sup>read as</sup> be <sup>as</sup> a CSR.

*Jim  
Blw  
3/16/04*



## **Post –demolition Summary Report for the Kaiser Shop Area, 100N**

### **Site Information**

The Kaiser Shop Area (KSA) was a collection of five buildings, one named waste storage facility, one gas cylinder storage area, and a number of un-named miscellaneous structures. A Historical Site Assessment was developed for the KSA (WCH, 2005).

**1515N Fixed Metal Shop:** This facility was used as a metal shop, where the normal activities and materials associated with fabricating small metal structures occurred. In addition to the shop floor, there were bathroom facilities and an “ice house” where containers of drinking water for site construction projects were prepared.

**1516N Carpenter Shop:** This facility was a carpenters shop, where the normal activities and materials associated with fabricating small wooden structures occurred.

**1517N Fixed Metal Paint Shop:** This facility was used for painting. At one point in time, one part of the facility was used to store respiratory protection equipment. To the north and west of this facility is an extensive area of discarded sand blasting grit.

**1518N Electrical Shop:** This facility was used in support of electricians and at one time, the crushing of electric light bulbs. To the north and east of this facility is an extensive area of discarded sand blasting grit.

**1519N Fixed Metal Filters Shop:** This facility was used in support of pipe fitters.

**1331N Waste Storage Facility:** This facility was a small metal framed and corrugated metal sheathed shelter for drums. The facility consisted of a rack where drummed liquids could be held in a horizontal position and a metal pan to contain any spills.

**1332N Gas Bottle Storage Dock:** This facility was used to store bottles of compressed gas. The dock was located on the southeastern corner of the 1515N concrete pads (WCH, 2005c).

**Miscellaneous Structure 1:** This structure consisted of a cyclone fence surrounded and metal roof protected concrete pad. The apparent use of the structure was for the storage of drummed materials.

**Miscellaneous Structure 2:** This structure consisted of a single wooded shed. The structure was 2X4 framed, plywood sheathed, with a metal shed roof. The structure is south of 1519N and is in good repair.

**Miscellaneous Structure 3:** This structure was a metal flammable storage cabinet. The structure is adjacent to miscellaneous structure 2. The structure had considerable exterior rust and is empty.

**Miscellaneous Structure 4:** This structure consists of concrete pads dispersed at multiple locations throughout the KSA.

**Miscellaneous Structure 5:** This structure is a large metal I-beam frame. The frame has been removed and is being reused as a frame to cut up sections of the 1802-N pipe trestle.

**Miscellaneous Structure 6:** This structure was the base to a now removed transformer. Large diameter electrical conduits have been cut off at the surface of the concrete. This structure was reportedly walked down with project personnel accompanied with electricians. There was a transformer previously at the site.

**Miscellaneous Structure 7:** This structure consisted of several storage shelters. Two of the structures were constructed of assembled scaffolding with plywood sheathed roofs. The roofs had rolled roofing as a cover. One structure consisted of a 2X4 framed shed with plywood sheathing. These storage structures were located west of 1516N.

#### **Radiological and IH Scooping Surveys**

Radiological and Industrial Hygiene (IH) scooping surveys were performed on the Kaiser Shop facilities prior to demolition. Results of the radiological surveys are documented on RSR-IFSM-05-0408, RSR-IFSM-05-0412, and RSR-IFSM-05-0417. Contamination attributed to biological vectors (mud daubers) was observed on the rooflines and potentially within the walls.

An IH baseline survey was conducted in December 2005.

#### **Waste Characterization Samples**

Given that the structures within the KSA were standard construction materials (wood, metal, concrete, glass, fiberglass insulation) existing waste profiles adequately described the waste stream. Therefore no samples were collected to designate the buildings. Samples were collected to identify potential asbestos containing materials (WCH, 2005b) and one sample was collected to identify potential health and safety issues relating to garnet sand blasting material.

All sampling is summarized in Attachment 1.

### **Waste Profiles**

Waste profile 100N007, rev 1 was used to disposition generated waste at the ERDF.

### **Post Demolition Radiological Survey**

Following demolition, the former KSA was surveyed for surface  $\beta$  and  $\gamma$  contamination by the ESHI's Field Radiological Measurements (FRM) group. See surveys: ESRFRM060023C, ESRFRM060024C, ESRFRM060029C, ESRFRM060030C, ESRFRM060033C, ESRFRM060034C, ESRFRM060042C, and ESRFRM060043C. Survey ESRFRM060024C exhibits a single  $\beta$  hit at about 3 times background. Subsequent surveys, by both D4 Project and FRM RCTs (ESRFRM060042C) indicated that the original observation was a false positive.

Additionally, D4 Project radiological controls technicians performed "down posting" surveys of the KSA and adjacent areas following demolition (RSR-IFSM-06-0025, RSR-IFSM-06-0032, RSR-IFSM-06-0038, RSR-IFSM-06-0041, RSR-IFSM-06-0042, RSR-IFSM-06-0045, RSR-IFSM-06-0053, RSR-IFSM-06-0054, RSR-IFSM-06-0055). These surveys revealed scattered spots of contamination. As the contamination was discovered at locations of former trailer offices or associated with animal burrows under existing concrete slabs, the source of the contamination was concluded to be biological vectors. As a matter of housekeeping, these spots of contamination, and associated structures (concrete walkways) were dispositioned to the ERDF.

### **Civil Survey Information (GPS, including elevation)**

A GPS civil survey was performed on the KSA prior to demolition. This survey located all building corners and extents of concrete slabs. The survey is attached as Attachment 2. A post demolition civil survey was not performed as the facilities were all slab on grade; only shallow depressions (<1 foot in depth) were excavated.

A sketch of the KSA is included as Figure 1.

### **Status of WIDS Sites Associated with Building Site**

There is only one WIDS site associated with the KSA, this is the garnet sand blasting grit area located in the north east corner of the KSA. This site has been designated as 100-N-81, Kaiser Shops Garnet Sandblasting Material. Prior to demolition activities, the extents of the garnet sand area within the KSA were mapped via GPS. This site was disturbed by demolition activities in that to prevent the spread of the sandblasting material away from its found location, the material was stockpiled into the northeast corner of the KSA.

### **Anomalies Discovered during Demolition**

No anomalous materials requiring individual characterization were discovered prior to, or during, demolition activities.

### **Final Building Status**

All of the buildings, concrete slabs, fence posts and fabric on the southern and western boundaries, and miscellaneous structures were dispositioned to the ERDF.

The site currently exists as a gravel and dirt field with gentle sloped shallow excavations where the buildings once stood.

There is no deferral to the Field Remediation project except for characterizing the 100-N-81 WIDS site. The only subsurface structures associated with the KSA are capped (fire protection water main) or otherwise reportedly, deactivated, utilities.

**Documentation**

Documents referenced in this summary are available through the Document Control organization. Additionally, photographs of the KSA prior, during, and following demolition activities are maintained in the field files of D4's Characterization group.

**References**

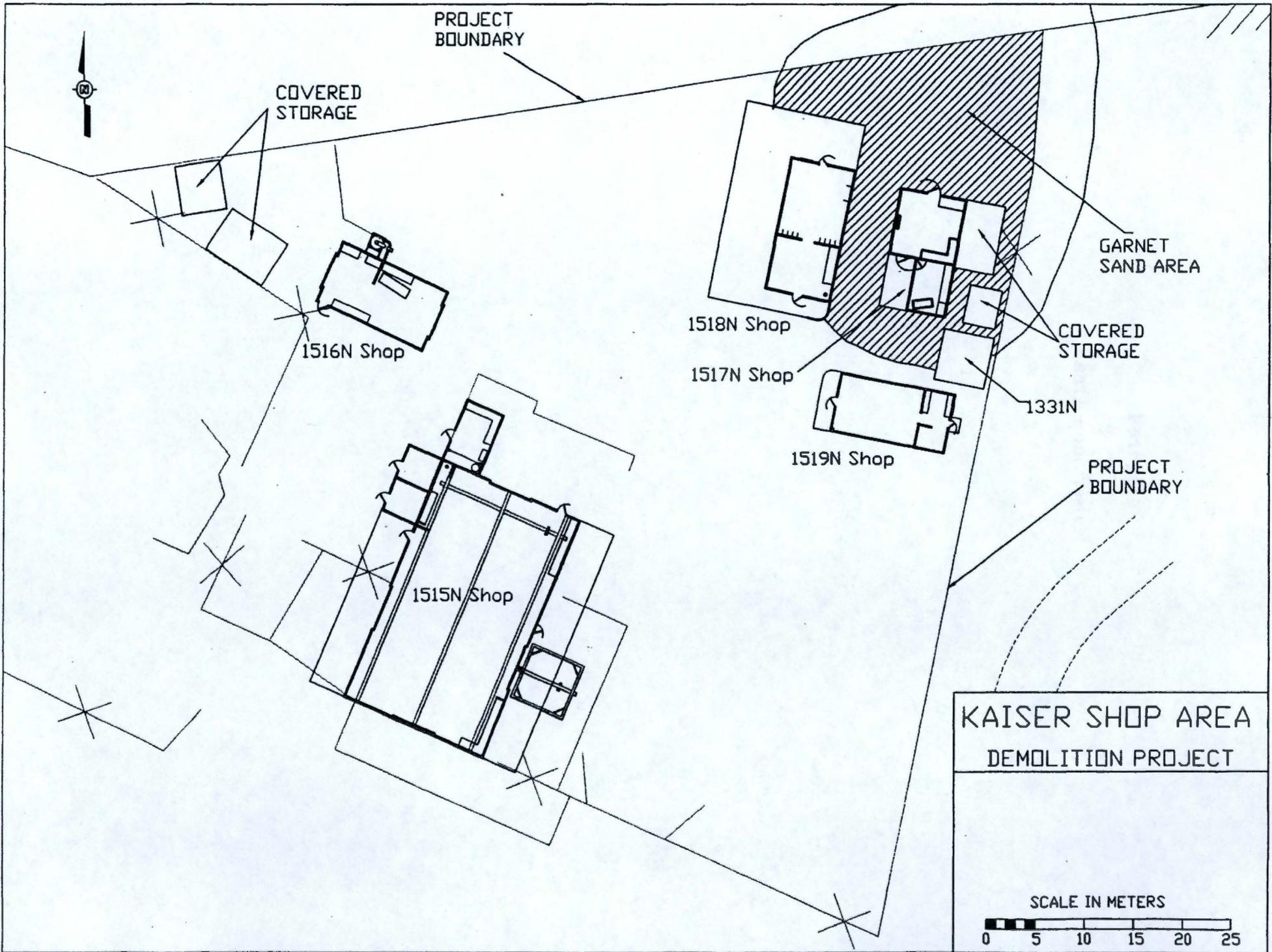
WCH, 2005, *Historical Site Assessment for the Kaiser Shop Area*, IOM 125281, Richland, WA.

WCH, 2005b, *Asbestos Summary Report, Kaiser Shops*, IOM 125282, Richland, WA.

WCH, 2005c, *Characterization Summary Report for the 1332-N Gas Bottle Storage Dock*, IOM #125277, Richland, WA.

**Figure 1**

**Kaiser Shop Area**



PROJECT BOUNDARY

COVERED STORAGE

1516N Shop

1518N Shop

1517N Shop

1519N Shop

1515N Shop

GARNET SAND AREA

COVERED STORAGE

1331N

PROJECT BOUNDARY

KAISER SHOP AREA  
DEMOLITION PROJECT

SCALE IN METERS



**Attachment 1**

**Summary Of Analytical Results**

**Sampling Summary  
Kaiser Shop Area, 100N**

HEIS #	Sample Date	logbook	logbook page	sample purpose	sample matrix	matrix detail	Location	Location detail	comments	COC	Lab	SDG
J10V32	7-Dec-2005	EL-1516-8	12	asbestos abatement	other solid	insulation	1519-N	insulation in walls	pink/white fibrous insulation with tar paper barrier	RC-006-028	WSCF	20056255
J10V33	7-Dec-2005	EL-1516-8	12	asbestos abatement	other solid	insulation	1519-N	insulation in walls	pink/white fibrous insulation with tar paper barrier	RC-006-028	WSCF	20056255
J10V34	7-Dec-2005	EL-1516-8	12	asbestos abatement	other solid	insulation	1519-N	insulation in walls	pink/white fibrous insulation with tar paper barrier	RC-006-028	WSCF	20056255
J10V35	7-Dec-2005	EL-1516-8	14	asbestos abatement	other solid	insulation	1517-N	insulation in walls	grey/brown fibrous insulation	RC-006-028	WSCF	20056255
J10V36	7-Dec-2005	EL-1516-8	14	asbestos abatement	other solid	insulation	1517-N	insulation in walls	grey/brown fibrous insulation	RC-006-028	WSCF	20056255
J10V37	7-Dec-2005	EL-1516-8	14	asbestos abatement	other solid	insulation	1517-N	insulation in walls	grey/brown fibrous insulation	RC-006-028	WSCF	20056255
J10V38	7-Dec-2005	EL-1516-8	15	asbestos abatement	other solid	insulation	1519-N	insulation in ceiling	yellow fibrous insulation	RC-006-028	WSCF	20056255
J10V39	7-Dec-2005	EL-1516-8	15	asbestos abatement	other solid	insulation	1519-N	insulation in ceiling	yellow fibrous insulation	RC-006-028	WSCF	20056255
J10V40	7-Dec-2005	EL-1516-8	15	asbestos abatement	other solid	insulation	1519-N	insulation in ceiling	yellow fibrous insulation	RC-006-028	WSCF	20056255
J10V41	7-Dec-2005	EL-1516-8	15	asbestos abatement	other solid	mastic	1516-N	adhesive securing styrofoam insulation	black amorphorous solid	RC-006-028	WSCF	20056255
J10VC5	15-Dec-2005	EL-1516-8	18	characterization	soil	stained soil	1517-N	behind building	garnet sandblast grit	RC-006-031	Eberline	K0149

**Attachment 2**

**Civil Survey**

# Survey Data Report

**Project : 100N-BUILDINGS**

<b>User name</b>	maaye	<b>Date &amp; Time</b>	3:32:47 PM 2/14/2006
<b>Coordinate System</b>	US State Plane 1983	<b>Zone</b>	Washington South 4602
<b>Project Datum</b>	NAD 1983 (Conus)		
<b>Vertical Datum</b>		<b>Geoid Model</b>	GEOID99 (Conus)
<b>Coordinate Units</b>	Meters		
<b>Distance Units</b>	Meters		
<b>Height Units</b>	Meters		

Survey Project Name/Title: 100N-BUILDINGS  
 Survey Purpose: Metric Template  
 Requested By: Dave Shea  
 General Site Location: 100-N  
 Charge Code: per building- so several  
 Field Surveyor: MARGO AYE  
 Computer Software Used: MARGO AYE  
 Survey Equipment Used: 5800  
 Control Monuments Used: Wells 119-N-26 and 119-N-72  
 Survey Method: RTK  
 Estimated Horizontal Precision: <=0.020m  
 Estimated Vertical Precision: <=0.050m  
 Fieldwork Start Date: November 29, 2005  
 Fieldwork Completion Date: December 12, 2005

Notes:

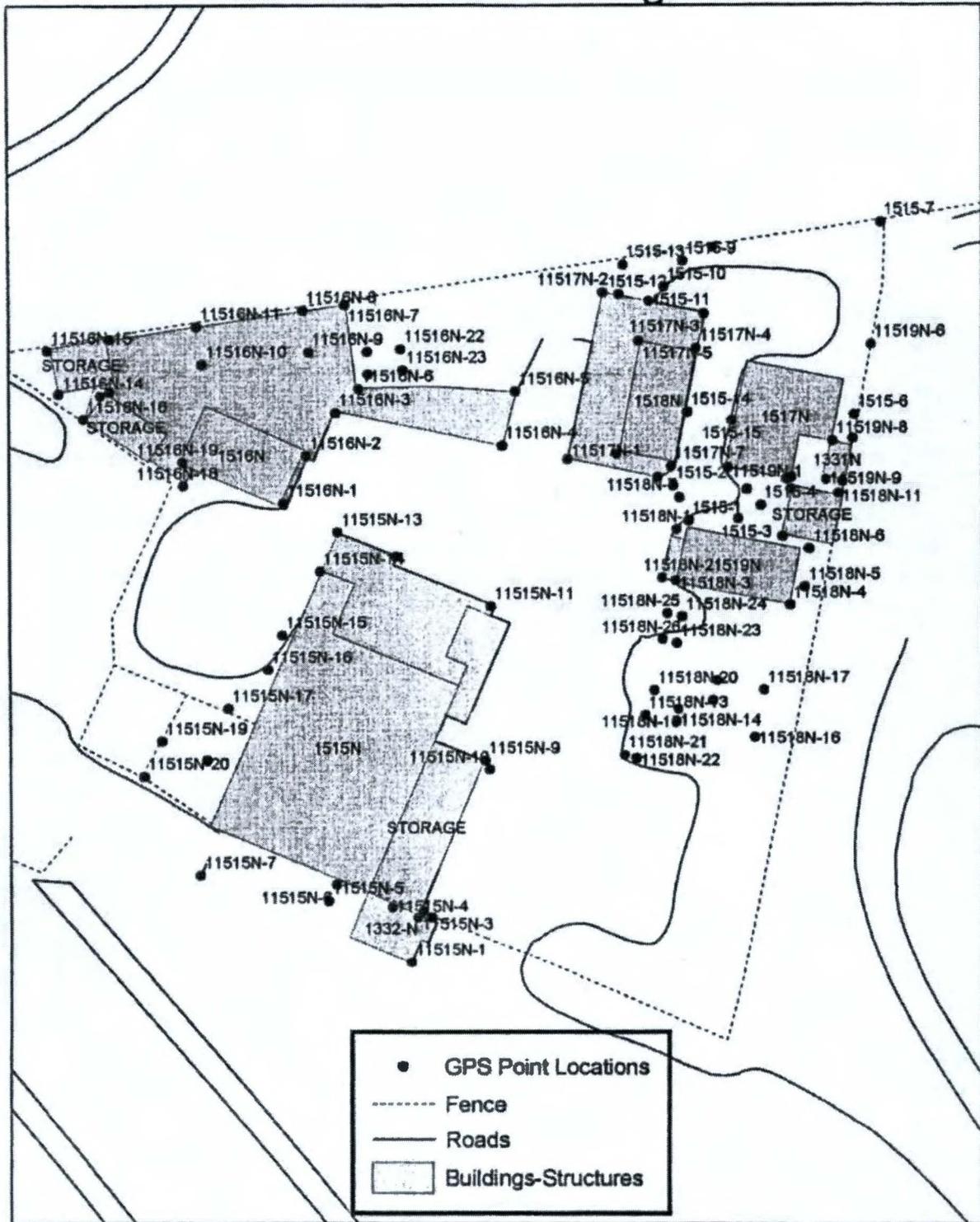
Name	Northing	Easting	Elevation	Feature Cod
1515N-1	149445.929m	571533.334m	140.924m	corn-conc-pad
1515N-2	149450.901m	571535.532m	140.954m	corn-conc-pad
1515N-3	149450.864m	571534.024m	140.951m	conc-pad-support
1515N-4	149452.008m	571531.338m	141.006m	conc-pad-support
1515N-5	149452.683m	571524.431m	141.008m	conc-pad-support
1515N-6	149454.494m	571525.293m	141.045m	conc-pad-support
1515N-7	149455.560m	571510.682m	141.023m	conc-pad
1515N-8	149451.557m	571534.651m	141.575m	corn-conc
1515N-9	149468.158m	571541.291m	140.919m	corn-conc
1515N-10	149467.193m	571541.755m	150.310m	corn-conc
1515N-11	149485.325m	571541.936m	140.875m	corn-conc
1515N-12	149490.782m	571531.737m	140.891m	corn-conc
1515N-13	149493.480m	571525.490m	140.853m	corn-conc
1515N-14	149489.166m	571523.560m	140.907m	corn-out-bldg
1515N-15	149482.122m	571519.493m	141.099m	corn-out-bldg
1515N-16	149478.271m	571517.942m	141.312m	corn-out-bldg
1515N-17	149473.972m	571513.671m	142.018m	corn-conc
1515N-18	149468.278m	571511.418m	140.953m	corn-conc
1515N-19	149470.327m	571506.586m	141.061m	corn-conc
1515N-20	149466.429m	571504.669m	140.941m	corn-conc
1516N-1	149496.683m	571519.643m	140.242m	corn-conc & bld
1516N-2	149501.806m	571522.125m	140.656m	corn-conc & bld

1516N-3	149506.567m	571525.284m	140.857m	corn-conc
1516N-4	149502.938m	571543.179m	140.743m	corn-conc
1516N-5	149508.859m	571544.612m	140.735m	corn-conc
1516N-6	149509.131m	571527.780m	140.849m	corn-conc
1516N-7	149518.325m	571526.282m	140.756m	corn-conc
1516N-8	149517.739m	571521.771m	140.769m	corn-conc
1516N-9	149513.178m	571522.403m	140.839m	corn-conc
1516N-10	149511.819m	571511.001m	140.926m	corn-conc
1516N-11	149515.955m	571510.425m	141.013m	corn-conc
1516N-12	149514.565m	571501.124m	141.089m	corn-conc
1516N-13	149508.846m	571501.132m	141.179m	corn-conc
1516N-14	149508.660m	571495.670m	141.018m	corn-out-bldg
1516N-15	149513.340m	571494.487m	140.985m	corn-out-bldg
1516N-16	149505.865m	571498.267m	141.053m	corn-out-bldg
1516N-17	149508.421m	571500.114m	140.920m	corn-out-bldg
1516N-18	149498.575m	571508.943m	140.595m	corn-conc
1516N-19	149501.134m	571508.909m	141.385m	corn-bldg
1516N-20	149510.730m	571528.844m	140.746m	corn-conc-pad
1516N-21	149513.224m	571528.726m	140.819m	corn-conc-pad
1516N-22	149513.493m	571532.290m	140.842m	corn-conc-pad
1516N-23	149511.175m	571532.525m	140.813m	corn-conc-pad
1518N-1	149501.463m	571550.283m	140.782m	corn-conc-pad
1518N-2	149519.684m	571554.105m	140.703m	corn-conc-pad
1518N-3	149517.359m	571565.138m	140.657m	corn-conc-pad
1518N-4	149513.588m	571564.289m	140.778m	corn-bldg
1518N-5	149514.351m	571557.974m	140.687m	corn-bldg
1518N-6	149502.048m	571555.561m	140.906m	corn-bldg
1518N-7	149500.690m	571561.550m	140.850m	corn-bldg
1518N-8	149499.469m	571560.051m	140.858m	corn-conc
1519N-1	149493.776m	571562.113m	140.789m	corn-conc
1519N-2	149488.426m	571560.507m	140.784m	corn-conc
1519N-3	149488.145m	571562.028m	140.831m	corn-bldg
1519N-4	149485.437m	571574.300m	140.481m	corn-bldg
1519N-5	149487.455m	571575.898m	140.276m	corn-bldg
1519N-6	149491.647m	571576.370m	140.413m	corn-bldg
1518N-7	149497.262m	571562.425m	152.436m	corn-bldg
1517N-1	149500.568m	571567.706m	140.636m	corn-bldg
1517N-2	149499.237m	571573.986m	140.544m	corn-bldg
1517N-3	149499.531m	571574.483m	145.575m	corn-out-bldg
1517N-5	149498.140m	571569.746m	57.829m	corn-conc
1517N-6	149513.975m	571583.007m	140.334m	corn-fence
1517N-7	149503.755m	571581.005m	140.470m	corn-fence
1517N-8	149503.470m	571578.882m	140.602m	corn-out-bldg
1517N-9	149499.254m	571578.178m	141.009m	corn-out-bldg
1517N-10	149499.008m	571579.931m	140.440m	corn-out-bldg
1518N-11	149497.732m	571579.476m	141.271m	corn-out-bldg
1518N-12	149492.997m	571573.594m	139.335m	corn-out-bldg
1515N-13	149473.197m	571558.600m	140.891m	corn-out-bldg
1515N-14	149472.480m	571562.066m	140.912m	corn-out-bldg
1515N-15	149473.889m	571562.287m	140.908m	corn-out-bldg
1515N-16	149470.778m	571570.542m	140.869m	corn-conc
1515N-17	149476.015m	571571.520m	140.838m	corn-conc
1515N-18	149477.053m	571566.465m	140.838m	corn-conc
1515N-19	149474.877m	571566.022m	140.857m	corn-conc
1515N-20	149475.959m	571559.627m	140.938m	corn-conc
1515N-21	149468.787m	571556.396m	140.936m	corn-conc
1515N-22	149468.457m	571557.695m	140.880m	corn-conc
1515N-23	149481.188m	571562.137m	140.727m	corn-conc
1515N-24	149484.130m	571562.734m	140.710m	corn-conc
1515N-25	149484.490m	571561.098m	140.686m	corn-conc

1515N-26	149481.630m	571560.565m	140.728m	corn-conc
1515-1	149494.735m	571563.420m	140.819m	garnet-max-ext
1515-2	149498.561m	571561.778m	140.851m	garnet-max-ext
1515-3	149494.944m	571568.789m	140.712m	garnet-max-ext
1515-4	149496.410m	571571.260m	140.687m	garnet-max-ext
1515-5	149498.231m	571574.397m	140.592m	garnet-max-ext
1515-6	149506.327m	571581.182m	141.193m	garnet-max-volume
1515-7	149527.244m	571584.104m	138.725m	garnet-max-volume
1515-8	149524.535m	571566.138m	140.204m	garnet-max-volume
1515-9	149523.075m	571562.856m	140.402m	garnet-max-volume
1515-10	149520.284m	571560.774m	140.607m	garnet-max-volume
1515-11	149518.726m	571559.140m	140.681m	garnet-max-volume
1515-12	149519.442m	571555.916m	140.743m	garnet-max-volume2
1515-13	149522.667m	571556.358m	140.741m	garnet-max-volume2
1515-14	149506.615m	571563.353m	140.918m	garnet-max-min-div
1515-15	149505.721m	571568.098m	140.868m	garnet-max-min-div
1517N-add2	149510.069m	571579.928m	140.700m	corn-bldg
1517N-add1	149512.267m	571569.849m	140.778m	corn-bldg
1516-add1	149507.404m	571511.235m	140.900m	corn-bldg

[Back to top](#)

# GPS Locations for Kaiser Shops 1332N and Surrounding WIDS



## **Data Definitions for the GPS Job for the Kaiser Shop Area:**

The attributes used to identify the GPS coordinates are as follows:

**Corn-bldg:** Corner of a building.

**Corn-conc:** Corner of Concrete foundation or walk way – usually connected or part of a building.

**Corn-con-pad:** Corner of a concrete pad, usually rectangular and separate or isolated from other features.

**Corn-conc & bld :** This refers to an area where the corner of a building also has a concrete edge protruding from the corner, there roughly a ½ meter distance between the concrete and the corner of the building.

**Corn-out-bldg:** Corner of an out building, which usually is used for storage and may not have doors, or has one or more open sides.

**Corn-fence:** Location of a fence, can be a bend or corner in the fence.

**Garnet-max-ext:** The extent of the garnet stained soil.

**Garnet-max-volume:** The maximum distance – used for to determine the area volume of the garnet stained area.

**Garnet-max-volume2 :** Same as garnet-max-volume, this is just a additional area, that was not connected to the major accumulation area.

**Garnet-max-min-div:** This refers the area where the garnet begins to be lighter in concentration, and gradually becomes lighter as it continues south towards the 1519N building.

125281

**WCH** Washington  
Closure  
Hanford

**Interoffice Memorandum**

**RECEIVED**

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TO: C. R. Watson X5-50

DATE: December 14, 2005

BY R & DC

COPIES: See Below  
Records and Document Control H0-30

FROM: *D. B. Encke*  
D. B. Encke  
D&D Characterization  
X5-50 / 373-9733

SUBJECT: **HISTORICAL SITE ASSESSMENT FOR THE KAISER SHOP AREA/100-N**

Attached is the Historical Site Assessment (HSA) for the Kaiser Shops Area (KSA). The KSA is a fence enclosed area of approximately 5,500 square meters located just north of the central parking lot of the 100-N Area. The KSA includes the following buildings: 1515N, 1516N, 1517N, 1518N, 1519N, 1331N, and a number on miscellaneous structures. The KSA has been the location for support shop activities.

This report contains a summary of information to assist in the planning and preparation efforts needed to deactivate, decontaminate, and demolish the structures within the KSA. This HSA is based upon site walkdowns and employee interviews; little historical documentation was found in the time allotted.

Information in this report includes a summary of hazardous materials that might be present in the KSA, identification of processes that occurred there, and potential issues that could impact demolition activities.

Please contact myself at 373-9733, or Dave Shea at 373-2267, if you have any question regarding this information.

DBE:cmj

Attachment: Historical Site Assessment (HSA) for the Kaiser Shop Area (KSA)

Copies (all w/a)

S. D. Alt, X0-34  
R. G. Ayers, L7-15  
D. A. Bigby, X5-50  
G. J. Borden, X5-50  
F. S. Brim, X5-50  
M. D. Cranston, X5-60  
J. W. Crocker, X5-50  
D. W. Eckert, X7-75  
D. B. Encke, X5-50  
R. G. Egge, X5-50  
G. J. Gibbons, X5-50  
J. W. Golden, L1-04

L. J. Hebdon, X0-34  
E. S. Hatfield, L1-04  
G. G. Hopkins, L1-01  
I. D. Jacques, L1-04  
W. L. Jones, L1-50  
C. E. Kennedy, H9-03  
R. R. Nielson, X5-50  
H. W. Ruby, X2-09  
D. W. Shea, X5-50  
R. A. Trevino, X5-50  
P. K. Wells, X5-50  
100 D4 Files X5-50

125281

## Attachment

**WCH D4 Facility Characterization  
Historical Site Assessment  
100N "Kaiser Shop" Area (KSA)  
November 2005**

**1. Facility Identification:**

The D4 Closure Project has established a hierarchy of risk based upon the potential radiological and chemical hazards present in facilities scheduled for characterization and demolition.

- Type III buildings are managed as being free of contamination: the building is not under radiological controls, personal protection equipment (PPE) is not required to enter the building, or there is no reasonable potential for release of hazardous materials to environment during demolition.
- Type II buildings are managed as being potentially contaminated by site operations and processes: radiological surveys have documented the presence of radioactive materials requiring controls, process knowledge indicates contamination could be present, PPE is required to enter the building, or a potential exists for releases to the environment during demolition.
- Type I buildings are managed as being significantly contaminated and/or contain other hazards: process operations or accidental release have resulted in extensive contamination, significant levels of PPE or engineering controls are needed to enter the building or portions thereof, or a significant potential exists for releases to the environment during demolition.

Based upon these criteria, the facilities and structures within in the Kaiser Shop Area (KSA) and associated facilities are assigned risk levels as follows:

1331N	Type II
1515N	Type II
1516N	Type II
1517N	Type II
1518N	Type II
1519N	Type II
Miscellaneous structures	Type III

**2. General Physical Description:**

**1515N Fixed Metal Shop:** This facility was used as a metal shop, where the normal activities and materials associated with fabricating small metal structures occurred. The facility is constructed of structural steel trusses, with insulated steel siding. The roof is a shallow gable design. The roof covers extensive areas on two sides. In addition to the shop floor, there are bathroom facilities and an "ice house" where containers of drinking water for

site construction projects were prepared. The foundation is concrete slab on grade. No equipment remains, except for ½-ton overhead cranes, components of the ventilation system, and components of the drinking water system.

**1516N Carpenter Shop:** This facility was a carpenters shop, where the normal activities and materials associated with fabricating small wooded structures occurred. The facility is constructed of metal framing on the walls with wooden trusses for the roof. The siding is a mixture of corrugated metal and corrugated fiberglass panels. The roof is a shallow gable design. The foundation is concrete slab on grade. No equipment remains except for a cyclone dust collector. To the west and northwest are two scaffolding and plywood covered storage areas and a small shed (Miscellaneous structure 7).

**1517N Fixed Metal Paint Shop:** This facility was used for painting. At one point in time, one part of the facility was used to store respiratory protection equipment. The facility is actually two buildings which share a common wall. One structure is possibly wood framed and has a mixture of corrugated metal and corrugated fiberglass panels on the walls. The roof is a shallow gable design of corrugated metal. Insulation batts are exposed on the walls and ceiling. The other half of the facility is wood sided. The roof is a shallow gable design, wood sheathed and covered with rolled roofing. The ceiling and walls in this half of the facility are surfaced with sheetrock. There is an attached storage structure constructed of scaffolding and plywood sheathing. To the south of this facility is an apparent drum pad (Miscellaneous structure 1). To the north and west of this facility is an extensive area of discarded sand blasting grit. Other than heaters, ventilation equipment, and cabinetry, little equipment remains.

**1518N Electrical Shop:** This facility was apparently used in support of electricians and at one time, the crushing of electric light bulbs. The facility is possibly wood framed with corrugated metal exterior sheathing and interior sheetrock. The roof is a shallow gable design of corrugated metal. The foundation is concrete slab on grade. No equipment remains except for that relating to ventilation and heating. To the north and east of this facility is an extensive area of discarded sand blasting grit.

**1519N Fixed Metal Filters Shop:** This facility was apparently used in support of pipe fitters. The term "filters" in the title, which came off of the D4 "J1" list of facilities, is probably an error; the facility was used by pipe fitters. The facility is possibly wood framed with corrugated metal exterior sheathing and interior sheetrock. The roof is a shallow gable design of corrugated metal. The foundation is concrete slab on grade. No equipment remains except for that relating to ventilation and heating. To the north of this facility is an apparent drum storage area (Miscellaneous structure 1).

**1331N Waste Storage Facility:** This facility is a small metal framed and corrugated metal sheathed shelter for drums. The facility consists of a rack where drummed liquids could be held in a horizontal position and a metal pan to contain any spills. To the south of this facility is an apparent drum pad (Miscellaneous structure 1).

**Miscellaneous Structure 1:** This structure consists of a cyclone fence surrounded and metal roof protected concrete pad. The apparent use of the structure was for the storage of drummed materials.

**Miscellaneous Structure 2:** This structure consists of a single wooded shed. The structure is 2 by 4 framed, plywood sheathed, with a metal shed roof. The structure is south of 1519N and is in good repair.

**Miscellaneous Structure 3:** This structure is a metal flammable storage cabinet. The structure is adjacent to miscellaneous structure 2. The structure has considerable exterior rust and is empty.

**Miscellaneous Structure 4:** This structure consists of concrete pads dispersed at multiple locations throughout the KSA.

**Miscellaneous Structure 5:** This structure is a large metal I-beam frame. The material is potentially recyclable. The structure is on a concrete pad northeast of 1516N.

**Miscellaneous Structure 6:** This structure is the base to a now removed transformer. Large diameter electrical conduits have been cut off at the surface of the concrete. This structure was reportedly walked down with project personnel accompanied with electricians. There was a transformer previously at the site.

**Miscellaneous Structure 7:** This structure consists of several storage shelters. Two of the structures are constructed of assembled scaffolding with plywood sheathed roofs. The roofs have rolled roofing as a cover. One structure consists of a 2 by 4 framed shed with plywood sheathing. These storage structures are located west of 1516N.

### **3. Historical Operations: (fires, releases, spills, etc.)**

The readily available historical data on the facilities and miscellaneous structures within the KSA provided no information on spills, fires, and related events. In discussions with Hanford personnel familiar with the KSA, no fires or significant releases of chemicals occurred other than that considered as normal for the time.

### **4. Current Operation Status:**

All of the facilities and miscellaneous structures at the KSA are largely stripped of equipment, materials, and furnishings. The electrical, water, and sewer service appears to be deactivated but no documentation of this could be found. Field Remediation was using the fire line earlier in the year. The position isolation valve (PIV) is closed but the presence of water at the fire system riser in the 1515N indicates leakage through the valve. In discussions with Hanford personnel familiar with the KSA, these facilities were in essence abandoned by the previous landlord when the Environmental Restoration Contractor (ERC) assumed control of the 100-N area in about 1998. The real estate of the KSA was not included within the ERC's workscope.



**Figure 5.2. The 1516N Carpenters Shop, the 1517N Paint Shop, and the 1519N Fitters Shop.**

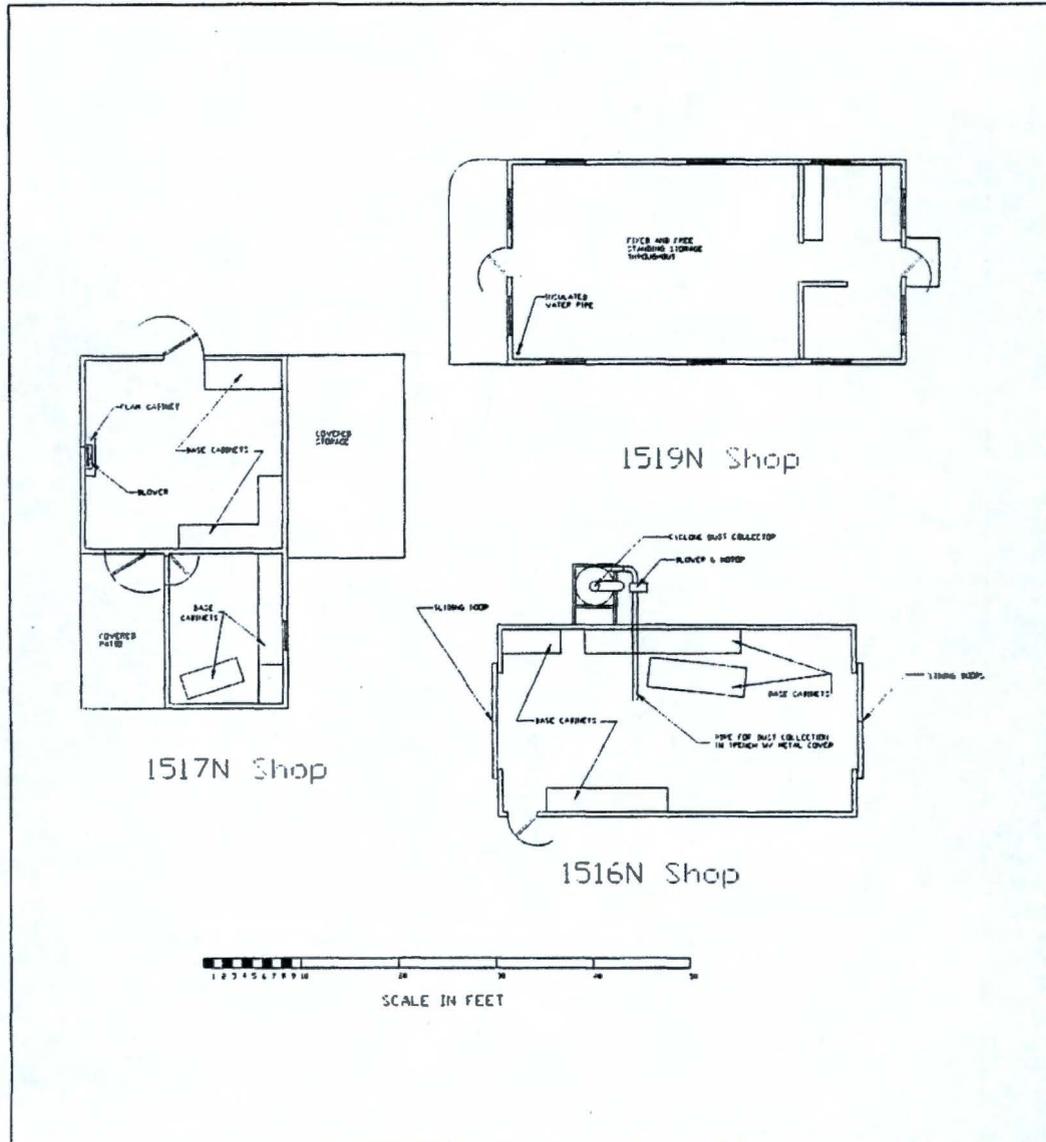


Figure 5.3. The 1518 Electrical Shop and surrounding concrete pads

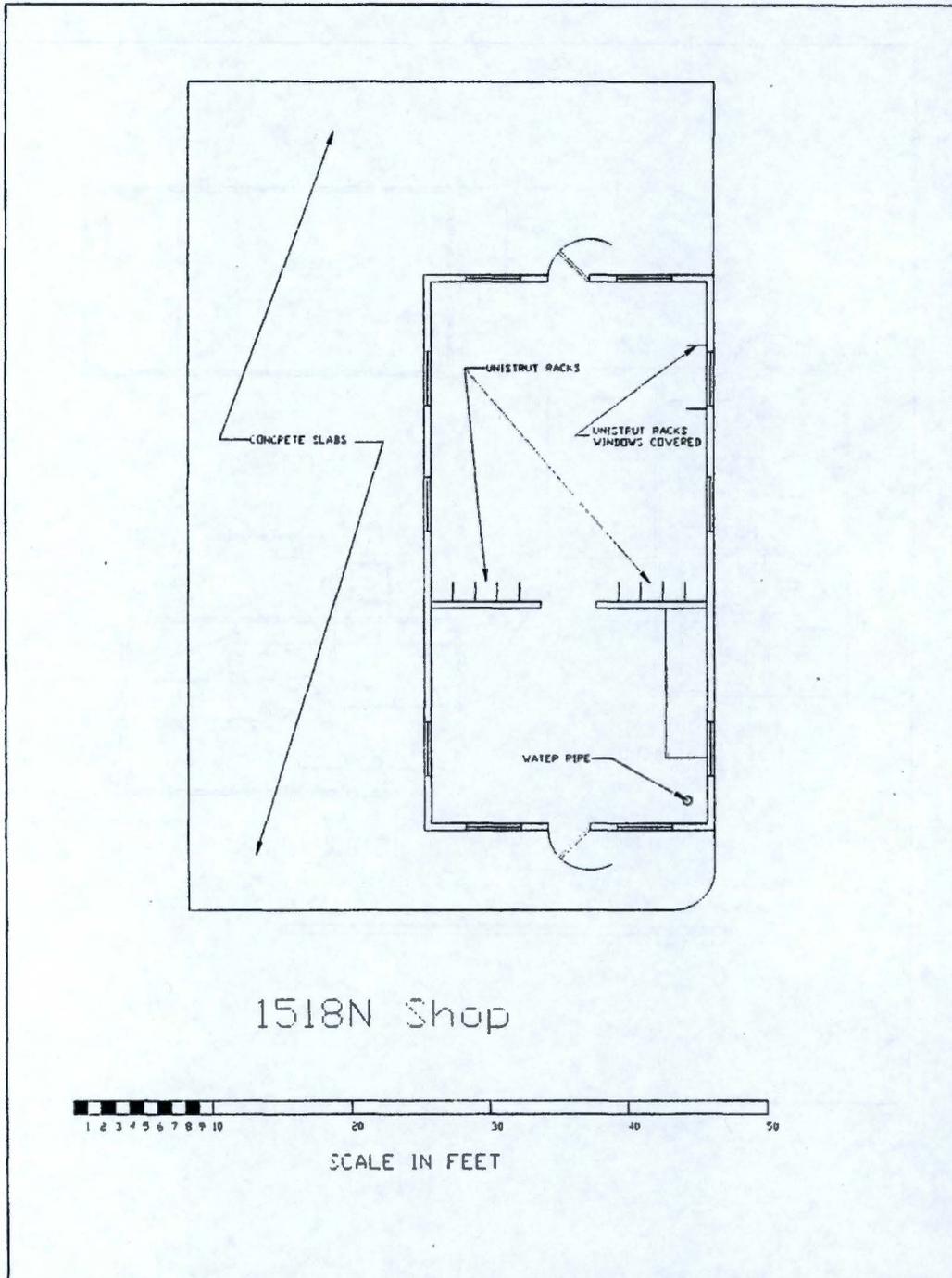
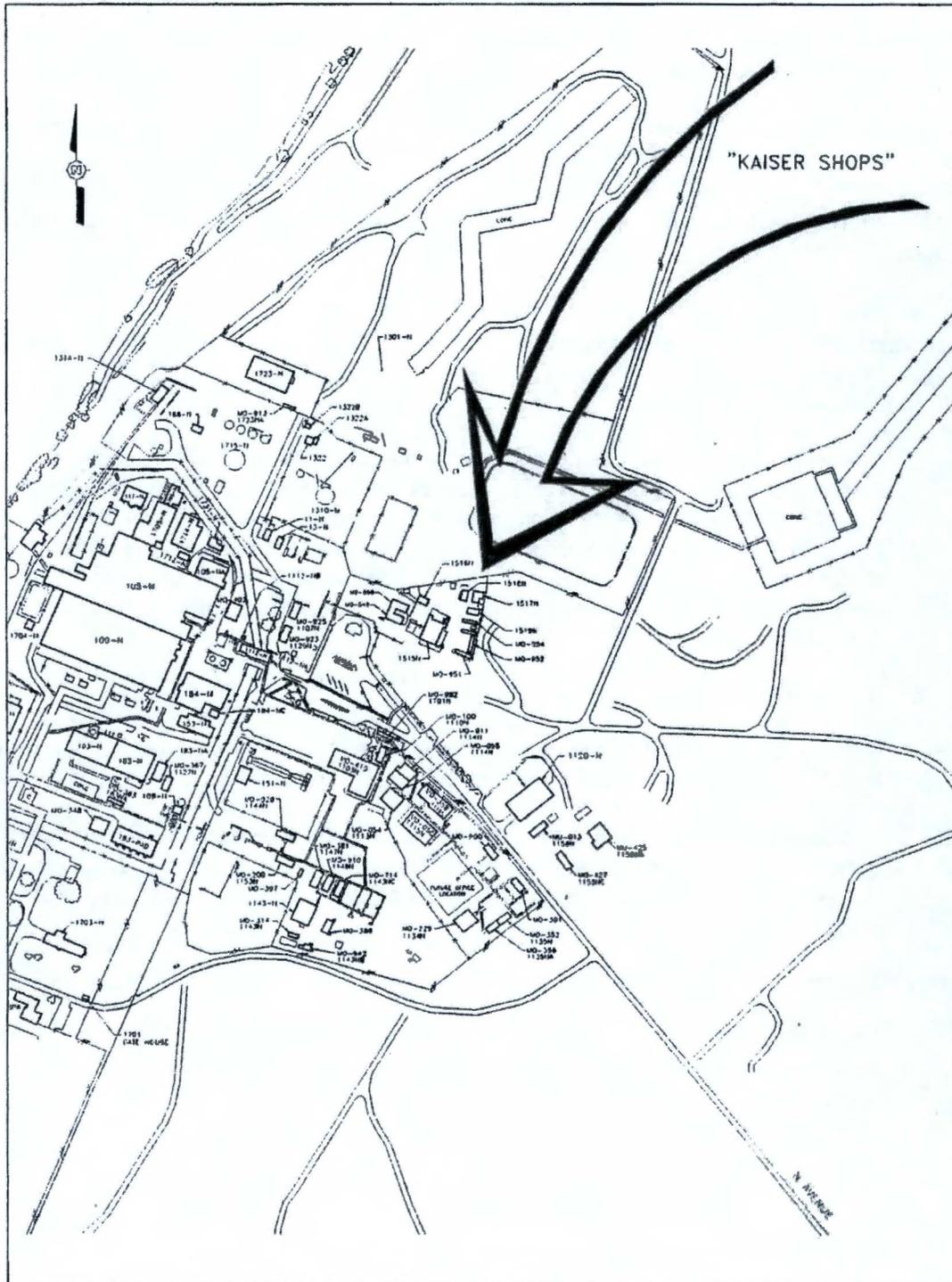


Figure 5.4 Site map:



## **6. Radiological Contaminants:**

All of the KSA facilities are contamination areas (CAs) at the roof line due to contamination spread by mud daubers. It is expected that these building will become CAs themselves once demolition begins because of the high probability of discovering additional mud dauber nests within the walls and attics.

All KSA facilities and miscellaneous structures: cobalt-60, cesium-137, and Strontium-90 due to contaminated mud dauber nests.

The isotopes producing an extremely small fixed contamination area within 1515N have not been identified.

## **7. Hazardous Material Contaminants:**

### **7.1 Asbestos:**

Minimal asbestos should be encountered in the KSA facilities or miscellaneous structures. Walkdowns identified isolated potential asbestos-containing material (PACM) as debris. The insulation in the walls appears to be fiberglass. But this should be verified. Several of the miscellaneous structures and portions of 1517N have rolled roofing. Conversations with Hanford employees familiar with work practices within the KSA indicate the asbestos gaskets were cut by hand from rolled gasket material in the 1519N.

### **7.2 Beryllium:**

None of the KSA facilities or miscellaneous structures are on the Hanford Beryllium Facility list: ([//www.hanford.gov/safety/beryllium/suspect3.htm](http://www.hanford.gov/safety/beryllium/suspect3.htm))

There is an overhead crane system in the 1515N metal shop, however upon closer examination it was determined that the system is mechanically powered, not electrically powered. Consequentially, beryllium hardened electrical contacts should not be present.

### **7.3 Lead:**

Minimal lead should be encountered in the KSA facilities or miscellaneous structures. No elemental was observed during walkdowns; none of the facilities with metal siding appear to have lead washers as part of the fastener system. There is the possibility that there are lead materials in electrical components. Iron bell and spigot piping (and potential lead caulk) was not observed in the portions of the sanitary sewer that were visible.

### **7.4 Mercury:**

Fire alarm pull boxes were observed in 1515N. Mercury switches might be present in thermostats in 1518N and 1519N.

### **7.5 Polychlorinated Biphenyls (PCBs):**

Five potentially oil filled door actuators were observed in 1515N. Two door actuators were found in 1518N and one door actuator was found in 1519N.

Fluorescent light fixtures were observed in all of the KSA facilities with the exception of 1331N.

### **7.6 Refrigerants:**

All of the facilities within the KSA appear to have used evaporative chillers for room cooling. The only exception is 1516N where window type air condition units had been mounted through the wall. Other than 1519N, all of the cooling units (evaporative and refrigerant based) appear to have been removed.

### **7.7 Other:**

- Bottles of saline (in eye wash stations) exist in all KSA facilities except for 1516N.
- On the north side of 1516N there is a barrel under the cyclone dust collector. The drum appears to contain rain water and perhaps sawdust.
- Conditions and potential hazards in the attics and within the walls of the KSA facilities are currently uncharacterized
- A number of room heaters may contain capillary tubes holding a volatile fluid. The thermostat by the door into the 1517N may also contain a volatile material.

## **8. Environmental Restoration Concerns:**

### **8.1 Waste Identification Data System (WIDS) Information**

There are no documented WIDS sites within the boundaries of the KSA. However, there is an expanse of garnet sand blasting material on the north side of 1517N and 1518N. This material extends outside of the fence line of the KSA.

### **8.2 Other:**

Information gleaned from discussions with Hanford workers familiar with past operations within the 100N area indicates that:

- 1) When the 100-N area was turned over to the ERC, there were very few documented WIDS sites; the suspicion is that there had only been minimal effort extended to researching potential sites.
- 2) The "Orphan Sites" walkdowns, performed in other 100 Areas to identify previously uncharacterized wastes, have not yet been performed.

- 3) When the KSA was turned over to the ERC there was little documentation to existing conditions. There is little evidence in the field as to the extent of past deactivation activities.
- 4) The swale to the east of the KSA was a favorite place to paint or otherwise work on projects as this location was out of the wind. The swale is outside D4's current workscope area at 100-N but may prove to contain uncharacterized hazardous materials.
- 5) An artifact assessment team is required to perform a walkdown prior to demolition on 1517N, 1518N, and 1519N (WCH 2005).
- 6) The KSA has the potential for provide nesting habitat for migratory birds. If demolition activities carry into the nesting season, March through July, contact the Natural Resources staff (WCH 2005).

**9. References:**

BHI, 2000, Waste Designation: *Sylvania Dulux EL Fluorescent Lamps*, (Wilber #0518087, Docs Open #303798), Bechtel Hanford, Inc., Richland, Washington.

BHI, 2003, Waste Designation: *High Pressure Sodium Lamps*, (Wilber # 0555637, Docs Open #519763), Bechtel Hanford, Inc., Richland, Washington.

BHI, 2004, Waste Designation: *Maintenance Shop PCB Ballasts*, (Wilber# 0557038, Docs Open #534853), Bechtel Hanford, Inc., Richland, Washington.

BHI, 2005a, Waste Designation: *Rail Road Ties, Telephone Poles, and Crossarms*, (Wilber# 121060, Docs Open #602834), Bechtel Hanford, Inc., Richland, Washington.

WCH, 2005, IOM, *Ecological and Cultural Resources Review for Demolition of the 1515-N Building Complex (05-ER-025)*, (Docs Open #124936), Washington Closure Hanford, Richland, Washington.

CCN # 125 281

**Customer To Complete:**

- This has action - Written response required: Yes \_\_\_\_\_ No \_\_\_\_\_  
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*Any questions, contact Cindy Jones @ 373-9657*

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DOCSOPEN # \_\_\_\_\_

Document/CCN Number: D4-100N-0001

**Customer To Complete:**

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**Attachment 2**

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: / of 3

Survey Number: <b>ESR-FRM-06-0023</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>02-08-2006 1100</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0008</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
---	--

Legend											
CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
☉	CPM	☼	Direct	Contact 30 cm	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)		Radiological Boundary x—x—x	Δ	Micro Rem (μrem/hr)	RBA	Radiological Buffer Area

Instrument(s)									
Instrument			Probe					Efficiency	
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1159	05-11-2006	44-10	2x2	0001	05-11-2006	1488	N/A	10.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

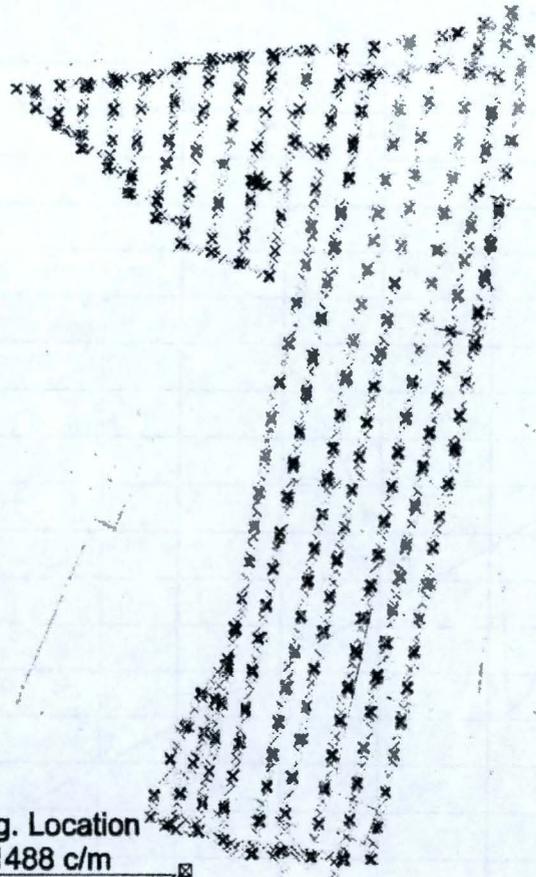
Remarks:  
GPERS BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N039 AND XN039.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> / <i>J. Owens</i> / 02-08-2006	RCT Supervisor Name/Signature/Date: <i>P. Brenberg</i> / <i>P. Brenberg</i> / 2/8/06
--	---





Site View



1518N

1517N

1519N

MO-954

MO-952

3 of 3

515N

-549

Bkg. Location  
1488 c/m

Legend

CPM

- < 2976
- 2976 - 5k
- 5k - 10k
- 10k - 25k
- > 25k

Summary Statistics

Coverage File: N039  
 Number of Data Pnts: 4775  
 Type of Survey: 'Gamma'  
 Max GCPM: 2280  
 Avg Bkg CPM: 1488  
 Survey Date: 02/08/2006  
 Area Surveyed: 2576 m2  
 Project File: N039  
 Pdf File: ESRFRM080023

**100N D4 Action  
 KEH Shop Area  
 GPERs Radiological Survey  
 Gamma Track Map**

10 0 10 Meters



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 HANFORD, INC.

Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <b>ESR-FRM-06-0024</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time: <b>02-08-2006 1300</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0004</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
---	--

Legend

CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
⊙	CPM	⊟	Direct	Contact	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)	⊠	Radiological Boundary	Δ	Micro Rem (μrem/hr)	RBA	Radiological Buffer Area

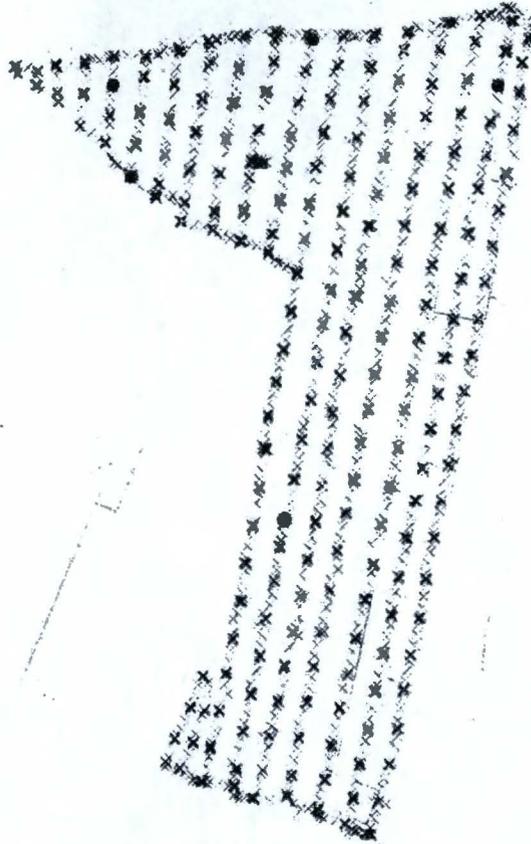
Instrument(s)

Instrument			Probe				Efficiency		
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1138	05-10-2006	SHP380AB	100cm2	0007	05-10-2006	398	N/A	21.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remarks:  
GPERs BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N039A AND XN039A.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> <i>J. Owens</i> / 02-08-2006	RCT Supervisor Name/Signature/Date: <i>P. Bronberger</i> / <i>P. Bronberger</i> 2/8/06
--	---





Site View

1518N

1517N

1519N

MO-954

MO-952

3 of 3

515N

549

Bkg. Location  
398 c/m →

Legend	Summary Statistics
CPM	Coverage File: N039A
	Number of Data Pnts: 3702
	Type of Survey: 'Beta'
× < 750	Max GCPM: 1126
● 750 - 1k	Avg Bkg CPM: 398
● 1k - 1.5k	Survey Date: 02/08/2006
● 1.5k - 2k	Area Surveyed: 2575 m2
● > 2k	Project File: N039A
	Pdf File: ESRFRM060024

**100N D4 Action**  
**KEH Shop Area**  
**GPERS Radiological Survey**  
**Beta Track Map**

10 0 10 Meters

Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <b>ESR-FRM-06-0029</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>02-14-2006 1100</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0004</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
---	--

Legend

<b>CA</b>	Contamination Area	<b>URMA</b>	Underground Radioactivity Area	<b>RA</b>	Radiation Area	<b>RMA</b>	Radioactive Material Area	<b>SCA</b>	Soil Contamination Area	<b>RMSA</b>	Radioactive Material Storage Area
<b>⊙</b>	CPM	<b>#</b>	Direct	<b>⊠</b>	Contact 30 cm	<b>⊠</b>	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)	<b>Δ</b>	Micro Ram (μrem/hr)	<b>RBA</b>	Radiological Buffer Area

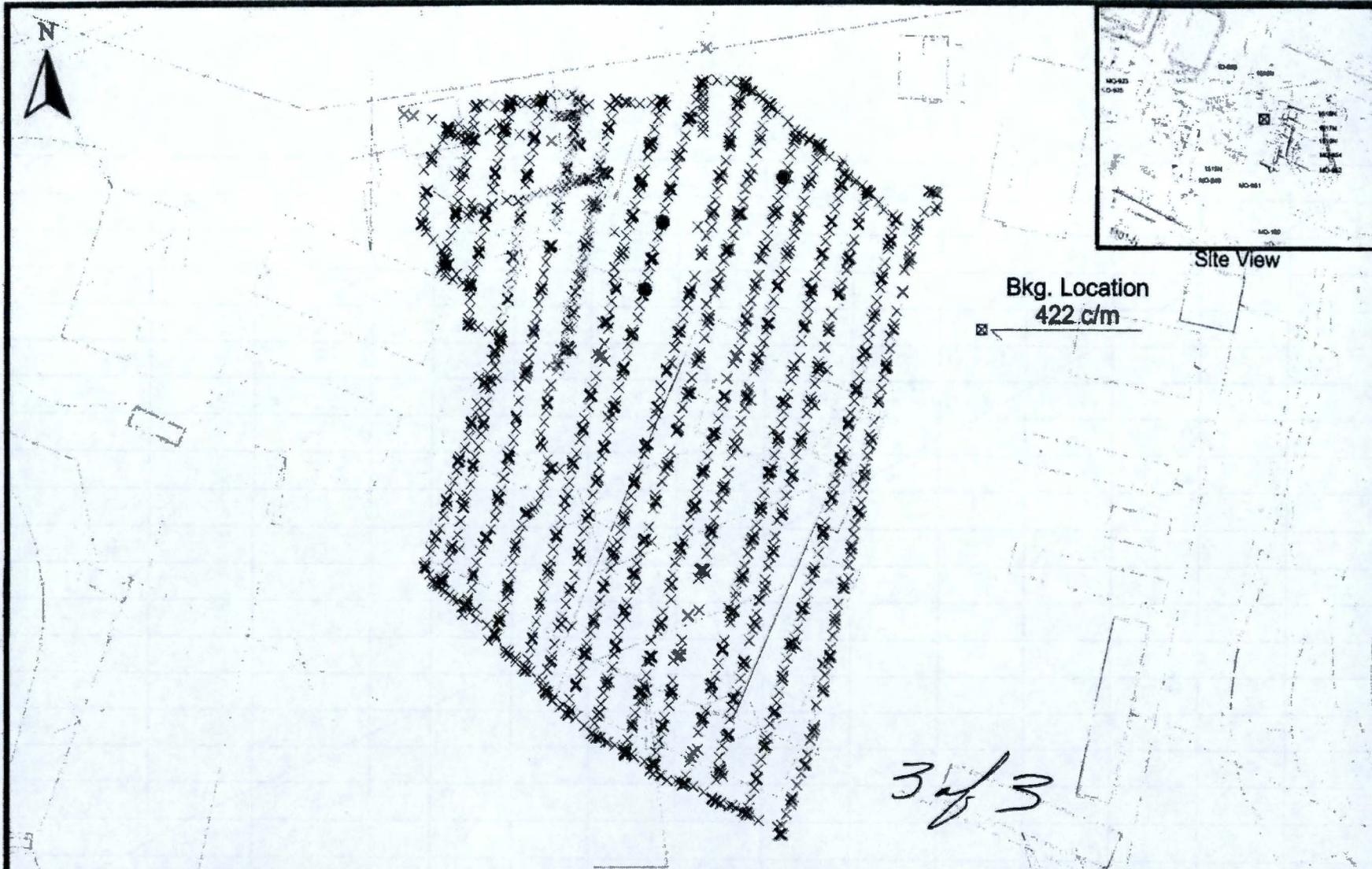
Instrument(s)

Instrument			Probe					Efficiency	
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E800	1138	05-10-2006	SHP380AB	100cm2	0007	05-10-2006	422	N/A	21.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remarks:  
GPERs BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N045, N045A, AND XN045.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> <i>J. Owens</i> / 02-14-2006	RCT Supervisor Name/Signature/Date: <i>P. Branberger</i> / <i>2/14/06</i>
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3 of 3

**Legend**

CPM

- × < 800
- 800 - 1k
- 1k - 1.5k
- 1.5k - 2k
- > 2k

**Summary Statistics**

Coverage File: N045  
 Number of Data Pnts: 5285  
 Type of Survey: 'Beta'  
 Max GCPM: 841  
 Avg Bkg CPM: 422  
 Survey Date: 02/14/2006  
 Area Surveyed: 2738 m2  
 Project File: N045  
 Pdf File: ESRFRM060029

**100N D4 Action  
 KEH Shop Area  
 GPERS Radiological Survey  
 Beta Track Map**

10 0 10 Meters



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Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <b>ESR-FRM-06-0030</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time: <b>02-14-2006 1400</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-06-0012</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
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Legend

CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
☉	CPM	#	Direct	Contact 30 cm	General Area Dose Rate Rates-Uncorrected Meter Reading (mR/hr)		Radiological Boundary x—x—x	Δ	Micro Ram (μrem/hr)	RBA	Radiological Buffer Area

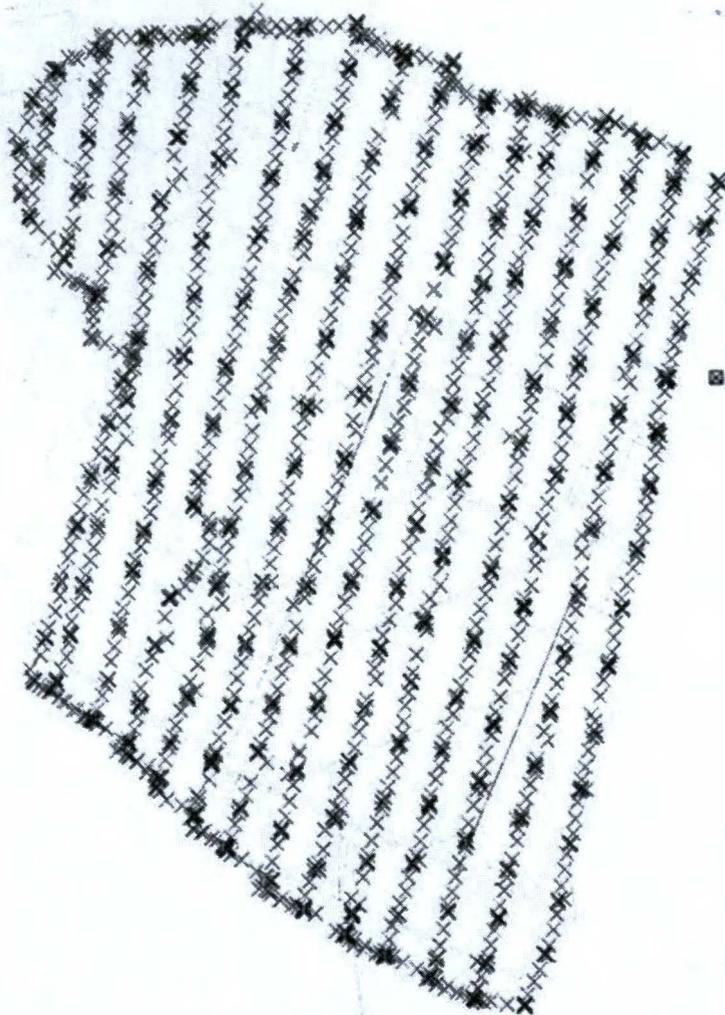
Instrument(s)

Instrument			Probe					Efficiency	
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1122	11-08-2006	SPA-3	2x2	0222	11-08-2006	134	N/A	7.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remarks:  
GPERS BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N045G AND XN045G.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> <i>J. Owens</i> / 02-14-2006	RCT Supervisor Name/Signature/Date: <i>P. Brenberger</i> / 2/14/06
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Site View

Bkg. Location  
1341 c/m



3 of 3

**Legend**

- CPM
- x < 2882
- 2882 - 5k
- 5k - 10k
- 10k - 25k
- > 25k

**Summary Statistics**

Coverage File: N045G  
Number of Data Pnts: 3875  
Type of Survey: 'Gamma'  
Max GCPM: 2419  
Avg Bkg CPM: 1341  
Survey Date: 02/14/2006  
Area Surveyed: 2738 m2  
Project File: N045G  
Pdf File: ESRFRM060030

**100N D4 Action  
KEH Shop Area  
GPERS Radiological Survey  
Gamma Track Map**



Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <b>ESR-FRM-06-0033</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>02-21-2006 1100</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0008</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
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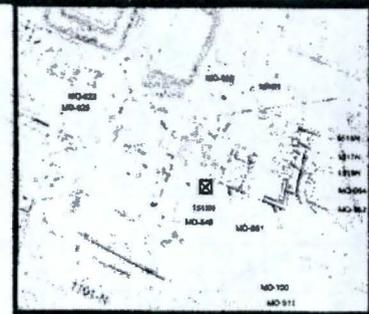
Legend											
CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
⊙	CPM	⊟	Direct	⊠	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)	⊞	Radiological Boundary x—x—x	Δ	Micro Rem (µrem/hr)	RBA	Radiological Buffer Area

Instrument(s)									
Instrument			Probe					Efficiency	
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1159	05-11-2006	44-10	2x2	0001	05-11-2006	1563	N/A	10%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

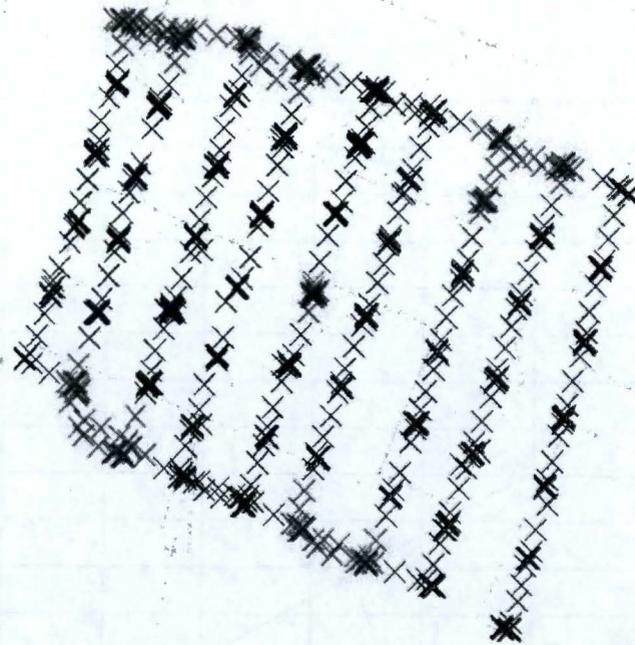
Remarks:  
GPERS BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N052 AND XN052.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> <i>J. Owens</i> / 02-21-2006	RCT Supervisor Name/Signature/Date: <i>P. Brenberger</i> / <i>2/21/06</i>
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Site View



Bkg. Location  
1563 c/m



*3 of 3*

**Legend**

- CPM
- × < 3126
  - 3126 - 5k
  - 5k - 10k
  - 10k - 25k
  - > 25k

**Summary Statistics**

Coverage File: N052  
Number of Data Pnts: 1218  
Type of Survey: 'Gamma'  
Max GCPM: 2238  
Avg Bkg CPM: 1563  
Survey Date: 02/21/2008  
Area Surveyed: 659 m2  
Project File: N052  
Pdf File: ESRFRM060033

**100N D4 Action  
KEH Shop Area  
GPERS Radiological Survey  
Gamma Track Map**

5 0 5 Meters



Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <b>ESR-FRM-06-0034</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>02-21-2006 1200</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0004</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002/REV.01 / WCH-EE-05, 2.22</b>
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Legend

CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
⊙	CPM	#	Direct	Contact 30 cm	General Area Dose Rate Rates—Uncorrected Meter Reading (mR/hr)		Radiological Boundary x—x—x	Δ	Micro Rem (μrem/hr)	RBA	Radiological Buffer Area

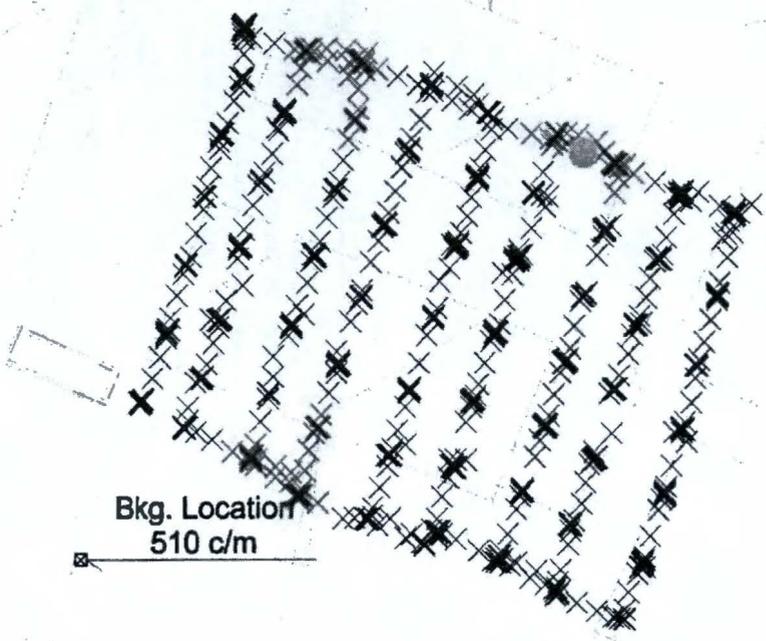
Instrument(s)

Instrument			Probe					Efficiency	
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1138	05-10-2006	SHP380AB	100cm2	0007	05-10-2006	510	N/A	21%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Remarks:  
GPERS BACKPACK SURVEY OF KAISER SHOP AREA. FILE NAMES ARE N052A AND XN052A.

RCT Name/Signature/Date: <b>J. CRAIG OWENS</b> / <i>J. Owens</i> / 02-21-2006	RCT Supervisor Name/Signature/Date: <i>P. Brenberger</i> / <i>P. Brenberger</i> / 2/21/06
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Site View

*3 of 3*

Legend	Summary Statistics
CPM	Coverage File: N052A
	Number of Data Pnts: 1072
	Type of Survey: 'Beta'
	Max GCPM: 818
× < 800	Avg Bkg CPM: 510
● 800 - 1k	Survey Date: 02/21/2006
● 1k - 1.5k	Area Surveyed: 659 m2
● 1.5k - 2k	Project File: N052A
● > 2k	Pdf File: ESRFRM060034

**100N D4 Action**  
**KEH Shop Area**  
**GPERS Radiological Survey**  
**Beta Track Map**

5 0 5 Meters

  
**HANFORD**

  
**EBERLINE SERVICES**  
 HANFORD, INC.

Survey Map Prepared By: Marc Wendling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 1 of 3

Survey Number: <i>ERS 12/11/06</i> <b>ERS-FRM-06-0042</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>03-02-06 1030</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0008</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002 , BHI-EE-05, 2.22</b>
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**Legend**

CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
©	CPM	#	Direct	Contact 30 cm	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)		Radiological Boundary X---X---X	Δ	Micro Rem (µrem/hr)	RBA	Radiological Buffer Area

**Instrument(s)**

Instrument			Probe				Efficiency		
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1159	5-11-2006	44-10	2" X 2"	0001	5-11-2006	1439	N/A	10.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

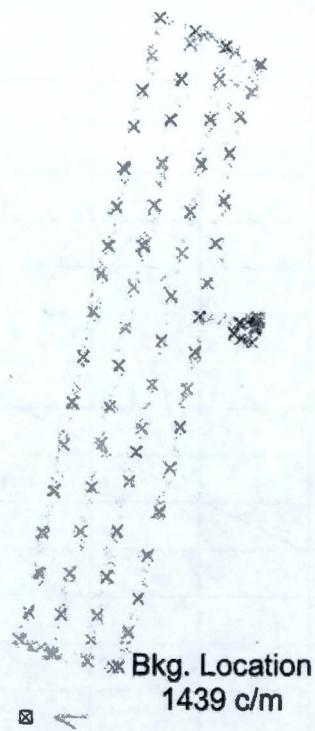
Remarks:  
GPERS GAMMA SURVEY OF KIASER SHOP AREA. FILE NAME N061, BKG XN061

RCT Name/Signature/Date: <b>SCOTT CURRY</b> <i>[Signature]</i> 3/2/06	RCT Supervisor Name/Signature/Date: <i>P. BRENBERGER</i> <i>[Signature]</i> 3/2/06
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Site View



1517

1519

MO-9

MO-9

1515N

MO-549

MO-951

*3 of 3*

Legend

- CPM
- < 2878
- 2878 - 5k
- 5k - 10k
- 10k - 25k
- > 25k

Summary Statistics

Coverage File: N061  
 Number of Data Pnts: 1279  
 Type of Survey: 'Gamma'  
 Max GCPM: 1961  
 Avg Bkg CPM: 1439  
 Survey Date: 03/02/2006  
 Area Surveyed: 741 m2  
 Project File: N061  
 Pdf File: ESRFRM060042

**100N D4 Action  
 KEH Shop Area  
 GPERs Radiological Survey  
 Gamma Track Map**

5 0 5 10 Meters



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Survey Map Prepared By: Marc Wandling - ESI

# ERC ENVIRONMENTAL RADIOLOGICAL SURVEY RECORD

Page: 6 of 3

Survey Number: <i>107 12/11/06</i> <b>ERS-FRM-06-0043</b>	Project: <b>100N REMEDIAL ACTION</b>	Date/ Time <b>03-02-06 1030</b>
Sampling Document Number (s): <b>N/A</b>	Project Location: <b>100N/ KAISER SHOP AREA</b>	RWP Number: <b>N/A</b>

SEE ATTACHED

Environmental Survey Instrument Data Sheet (ESIDS) Number: <b>ESID-FRM-05-0004</b>	ERSTI / Procedure Number: <b>ERSTI-05-0002 , BHI-EE-05, 2.22</b>
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**Legend**

CA	Contamination Area	URMA	Underground Radioactivity Area	RA	Radiation Area	RMA	Radioactive Material Area	SCA	Soil Contamination Area	RMSA	Radioactive Material Storage Area
©	CPM	#	Direct	Contact 30 cm	General Area Dose Rate Rates=Uncorrected Meter Reading (mR/hr)		Radiological Boundary X---X---X	Δ	Micro Rem (µrem/hr)	RBA	Radiological Buffer Area

**Instrument(s)**

Instrument			Probe				Efficiency		
Model	Serial #	Calibration Due Date	Model No.	Probe Area	Serial No.	Calibration Due Date	Bkgd	α	βγ
E600	1138	5-10-2006	SHP380AB	100cm2	0007	5-10-2006	4/0	N/A	21.0%
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

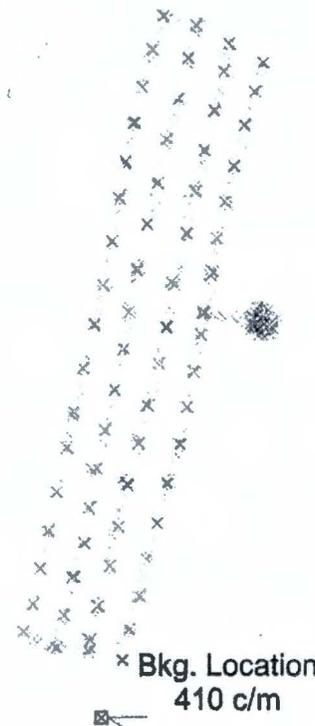
Remarks:  
GPERS BETA SURVEY OF KIASER SHOP AREA. FILE NAME N061B, BKG XN061B

RCT Name/Signature/Date: <b>SCOTT CURRY</b> <i>[Signature]</i> 3-2-2006	RCT Supervisor Name/Signature/Date: <i>P. BRENNBERGER</i> <b>P. BRENNBERGER</b> <i>[Signature]</i> 3/2/06
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Site View



1517N

1519N

MO-95

MO-95

1515N

MO-549

MO-951

3 of 3

Legend

CPM

- < 800
- 800 - 1k
- 1k - 1.5k
- 1.5k - 2k
- > 2k

Summary Statistics

Coverage File: N061B  
 Number of Data Pnts: 1348  
 Type of Survey: 'Beta'  
 Max GCPM: 650  
 Avg Bkg CPM: 410  
 Survey Date: 03/02/2006  
 Area Surveyed: 741 m2  
 Project File: N061B  
 Pdf File: ESRFRM060043

**100N D4 Action  
 KEH Shop Area  
 GPERs Radiological Survey  
 Beta Track Map**

5 0 5 10 Meters



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Survey Map Prepared By: Marc Wendling - ESI