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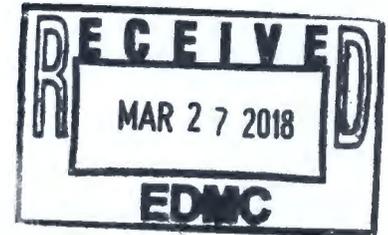


**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

18-AMRP-0068

**MAR 27 2018**

Ms. Alexandra K. Smith, Program Manager  
Nuclear Waste Program  
Washington State Department of Ecology  
3100 Port of Benton Boulevard  
Richland, Washington 99354



Dear Ms. Smith:

**REQUEST FOR WAIVER OF SECURITY ADDENDA REQUIREMENTS FOR THE  
216-A-29 DITCH, 216-A-36B CRIB, 216-A-37-1 CRIB, 216-B-3 MAIN POND, 216-B-63  
TRENCH AND 216-S-10 POND AND DITCH**

This letter provides a request from the U.S. Department of Energy Richland Operations Office (RL) to the Washington State Department of Ecology to grant a waiver for the 216-A-29 Ditch, 216-A-36B Crib, 216-A-37-1 Crib, 216-B-3 Main Pond, 216-B-63 Trench and 216-S-10 Pond and Ditch from the security requirements as identified in WAC 173-303-806(4)(a)(iv).

The Attachments (listed below) provide justification for the waivers. Pictures and maps of the Treatment, Storage and Disposal (TSD) Unit Groups are included. In addition, certification statements are provided for the submittal of the security waivers for the TSD units below:

- Information and Justification of the Security Waiver for the 216-A-29 Ditch in the 200 East Area
- Information and Justification of the Security Waiver for the 216-A-36B Crib in the 200 East Area
- Information and Justification of the Security Waiver for the 216-A-37-1 Crib in the 200 East Area
- Information and Justification of the Security Waiver for the 216-B-3 Main Pond in the 200 East Area
- Information and Justification of the Security Waiver for the 216-B-63 Trench in the 200 East Area
- Information and Justification of the Security Waiver for the 216-S-10 Pond and Ditch in the 200 West Area

ale

Ms. Alexandra K. Smith  
18-AMRP-0068

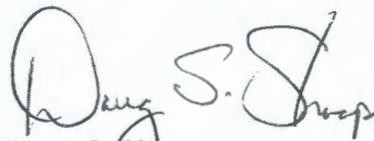
-2-

MAR 27 2018

RL has worked closely with Nina Menard of your staff, during the development of these documents.

If you have any questions, please contact me, or your staff may contact Joe Franco, Assistant Manager for the River and Plateau, on (509) 373-9971.

Sincerely,



Doug S. Shoop  
Manager

AMRP:DBC

Attachments

cc w/attachs:

J. L. Cantu, Ecology

**Administrative Record** (TSDs: D-2-3,  
D-2-4, D-2-10, D-2-5, D-2-6, D-2-7)

Ecology NWP Library

Environmental Portal

HF Operating Record (J. K. Perry, MSA, A3-01)

cc w/o attachs:

D. J. Alexander, Ecology

R. E. Bullock, CHPRC

A. S. Carlson, Ecology

D. R. Collins, Ecology

L. J. Cusack, CHPRC

S. L. Dahl-Crumpler, Ecology

M. E. Jones, Ecology

P. W. Martin, CHPRC

N. M. Menard, Ecology

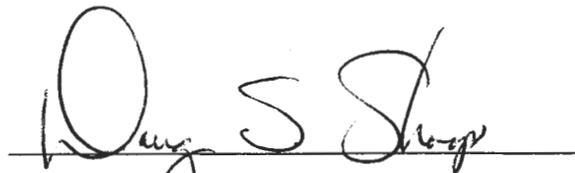
D. G. Singleton, CHPRC

**U.S. Department of Energy Richland Operations Office Certification**

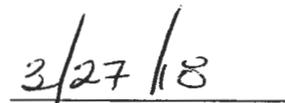
In accordance with WAC 173-303-810(13), the following certification statement is provided for the submittal of the following documents:

- Information and Justification of the Security Waiver for the 216-A-29 Ditch in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-A-36B Crib in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-A-37-1 Crib in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-B-3 Main Pond in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-B-63 Trench in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-S-10 Pond and Ditch in the 200 West Area.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Doug S. Shoop, Manager  
U.S. Department of Energy  
Richland Operations Office



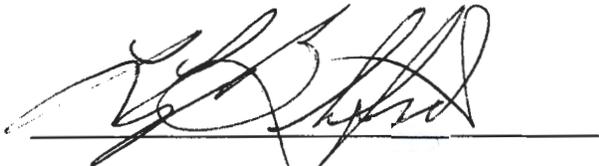
Date

### CH2M HILL Plateau Remediation Company Certification

In accordance with WAC 173-303-810(13), the following certification statement is provided for the submittal of the following documents:

- Information and Justification of the Security Waiver for the 216-A-29 Ditch in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-A-36B Crib in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-A-37-1 Crib in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-B-3 Main Pond in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-B-63 Trench in the 200 East Area.
- Information and Justification of the Security Waiver for the 216-S-10 Pond and Ditch in the 200 West Area.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



L. Ty Blackford, President  
and Chief Executive Officer  
CH2M HILL Plateau Remediation Company



Date

## Information and Justification of the Security Waiver for 216-A-29 Ditch in the 200 East Area

The Washington State Department of Ecology, WAC 173-303-806 requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

In 1955, the 216-A-29 Ditch in the 200 East Area began to receive non-regulated process and cooling water from the Plutonium-Uranium Extraction (PUREX) Plant, and also received regulated discharges of corrosive (acid and caustic) mixed waste (D002) backwashes from regeneration of demineralizer columns in the PUREX Plant. Treatment of this waste occurred by the successive addition of acidic and caustic waste, which served to neutralize the waste in the ditch. The ditch also received off-specification make-ups of essential chemicals used in the process and spills from the PUREX Plant. The only regulated off-specification dangerous waste chemical was Hydrazine (U133). The spilled mixed waste consisted of toxicity characteristic waste (Cadmium, D006) and state only toxic waste (WT02).

The ditch was backfilled and the surface stabilized in 1991. Part of the area has been revegetated. Therefore, physical contact and disturbance of the waste is not possible for persons or livestock which may enter the ditch area.

The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of annual surveillances.



November 2017. Head end of the 216-A-29 Ditch. Photo was taken facing east.



November 2017. Upper part of Snow's Canyon, east of 4<sup>th</sup> Street and south of WTP Loop Road.



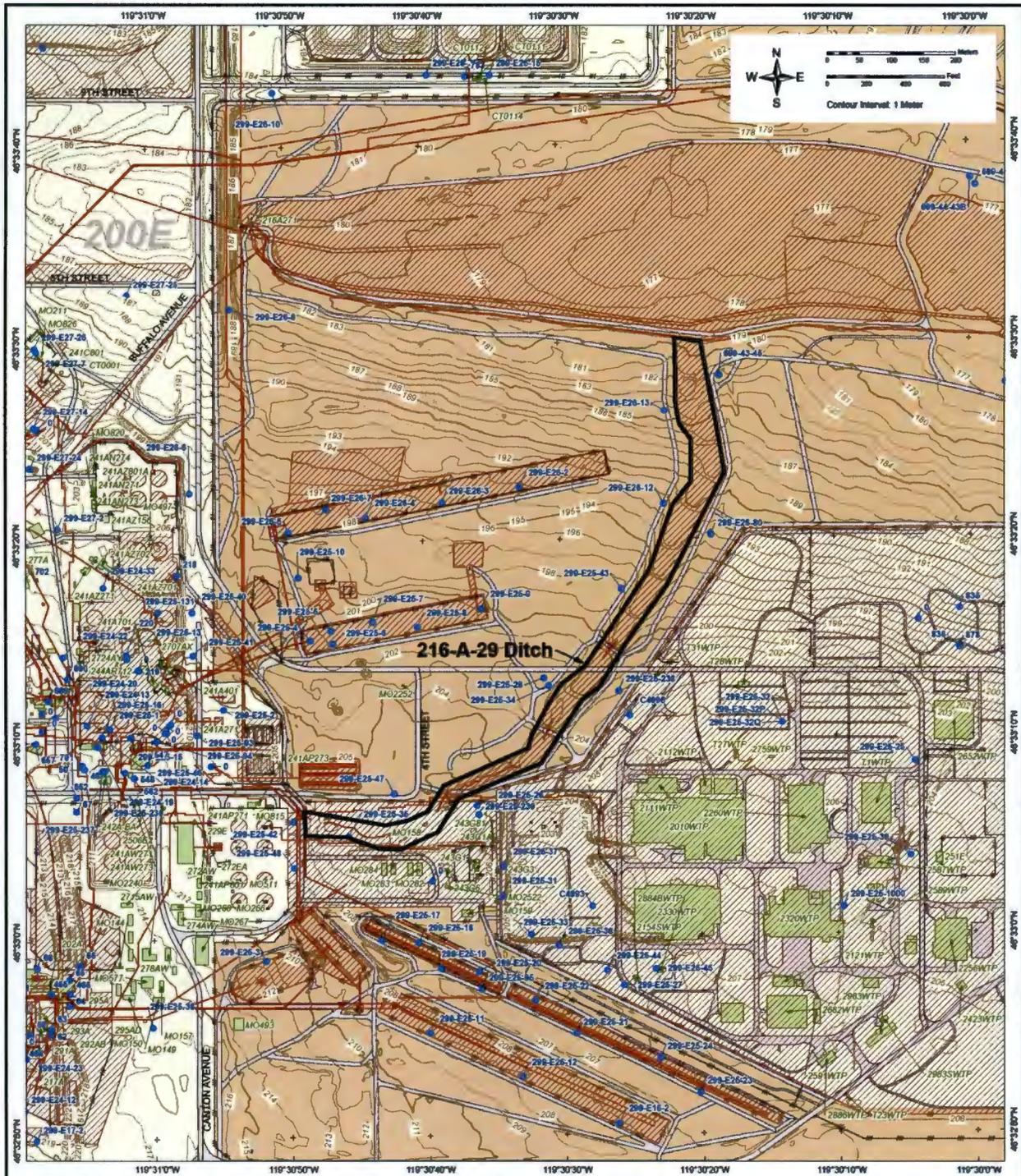
Lower part of Snow's Canyon. Photo taken from WTP Loop Road that crosses the 216-A-29 Ditch. Photo was taken facing north.



Lower part of Snow's Canyon. Photo taken from WTP Loop Road that crosses the 216-A-29 Ditch. Photo was taken facing north.



Lower part of Snow's Canyon where the 216-A-29 Ditch meets the 216-B-3-3 Ditch. Photo was taken facing north.



**The Hanford Site**

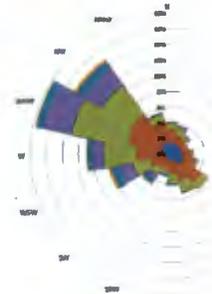


Area Shown on Map

**216-A-29 Ditch  
in the  
200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings & Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
**US DEPARTMENT OF ENERGY**  
 RICHLAND OPERATIONS OFFICE

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 Coordinate System: Washington State Plane, South Zone, Meters  
 Horizontal Datum: NAD83  
 Vertical Datum: NAVD83  
 Topographic Data:  
 1985, Bechtel Hanford, Inc.

## **Information and Justification of the Security Waiver for 216-A-36B Crib in the 200 East Area**

The Washington State Department of Ecology, WAC 173-303-806, requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

The 216-A-36B Crib was an underground Miscellaneous Unit (X99) that was used for the percolation of Ammonia Scrubber Distillate waste from the Plutonium-Uranium Extraction (PUREX) facility via the 200-E-253-PL pipeline. Operations began in March 1966 and ended in November 1987. The crib is located south of PUREX.

Ammonium hydroxide was released to the 216-A-36B Crib. Ammonia in its pure form is a toxic Category B (for fish toxicity) under the toxicity criteria of WAC 173-303-100(5). This waste was determined to be toxic state-only waste (WT02).

The waste percolation area in the crib was located between 22 and 24 feet underground. The Crib has been backfilled and surface stabilized with gravel. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock which may enter the crib area.

The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly surveillances.



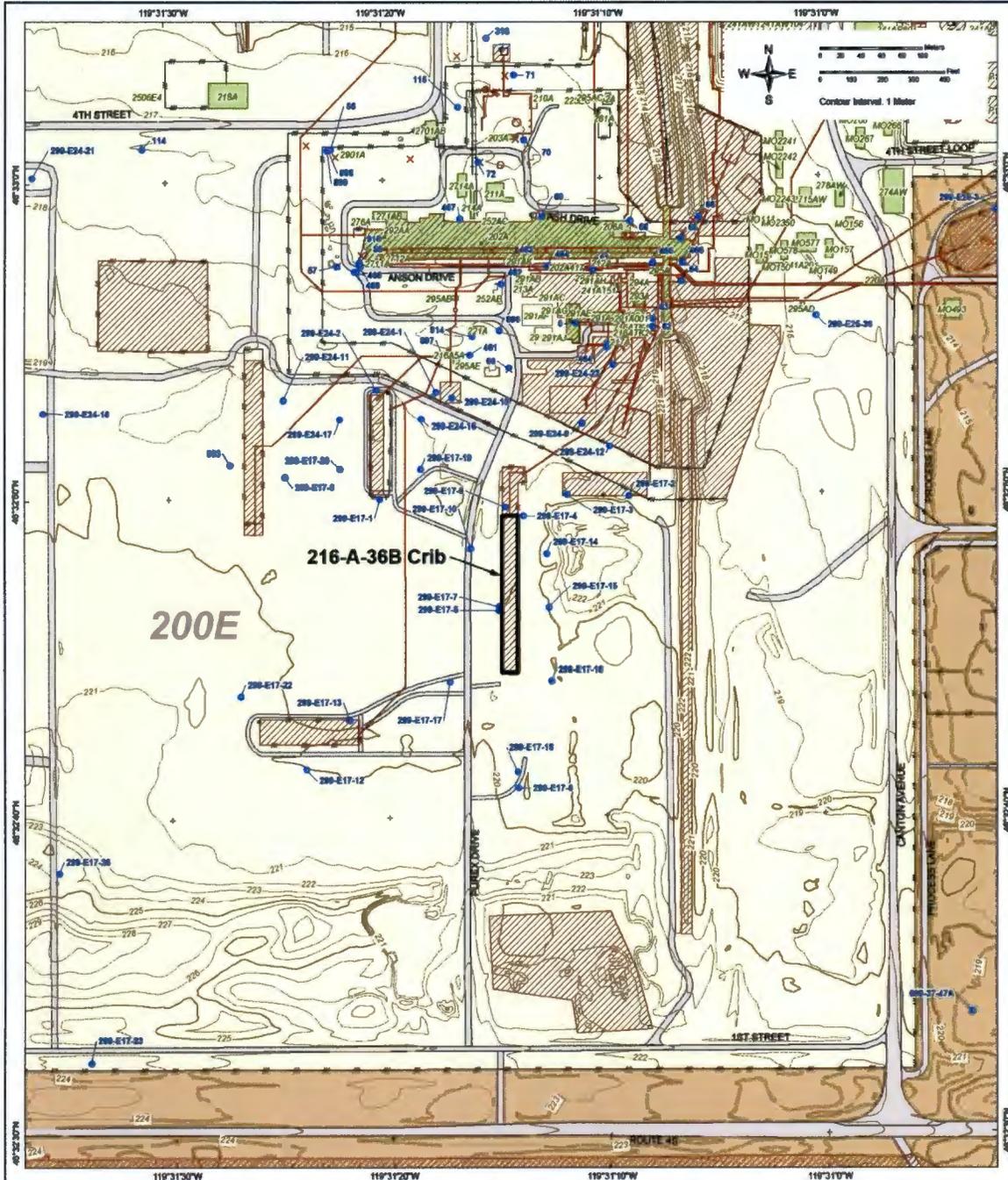
November 2017. Photo of the 216-A-36B Crib. Photo was taken facing southwest.



November 2017. Head end of the 216-A-36B Crib. The crib area starts at the sign beyond groundwater monitoring well 299-E17-9.



November 2017. Head end of the 216-A-36B Crib. The crib area starts at the sign at the right side of the photo.

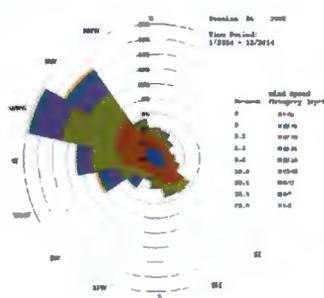


**The Hanford Site**



Area Shown on Map

- TBD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility
- SWMLs and Known Releases
- Linear SWMLs and Known Releases
- Spot SWMLs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



**216-A-36B Crib  
in the  
200 East Area**

Prepared for:  
US DEPARTMENT OF ENERGY  
RICHLAND OPERATIONS OFFICE

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Mission Support Alliance, Richland, WA (509) 373-8800

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Vertical Datum: NAVD83  
Topographic Data:  
1996, Bechtel Hanford, Inc.

## **Information and Justification of the Security Waiver for 216-A-37-1 Crib in the 200 East Area**

The Washington State Department of Ecology, WAC 173-303-806, requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

The 216-A-37-1 Crib was an underground Miscellaneous Unit (X99) that was used for the percolation of the 242-A Evaporator process condensate. Operations began in March 1977 and ended in April 1989.

The 242-A Evaporator process condensate was regulated as mixed waste because the waste was derived from a waste containing Acetone, Methyl Isobutyl Ketone (Hexone), and 2-Butanone. These spent non-halogenated solvents make the waste designate as F003, and F005 dangerous waste.

The waste percolation area in the crib was located between 7 and 11 feet underground. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock which may enter the crib area.

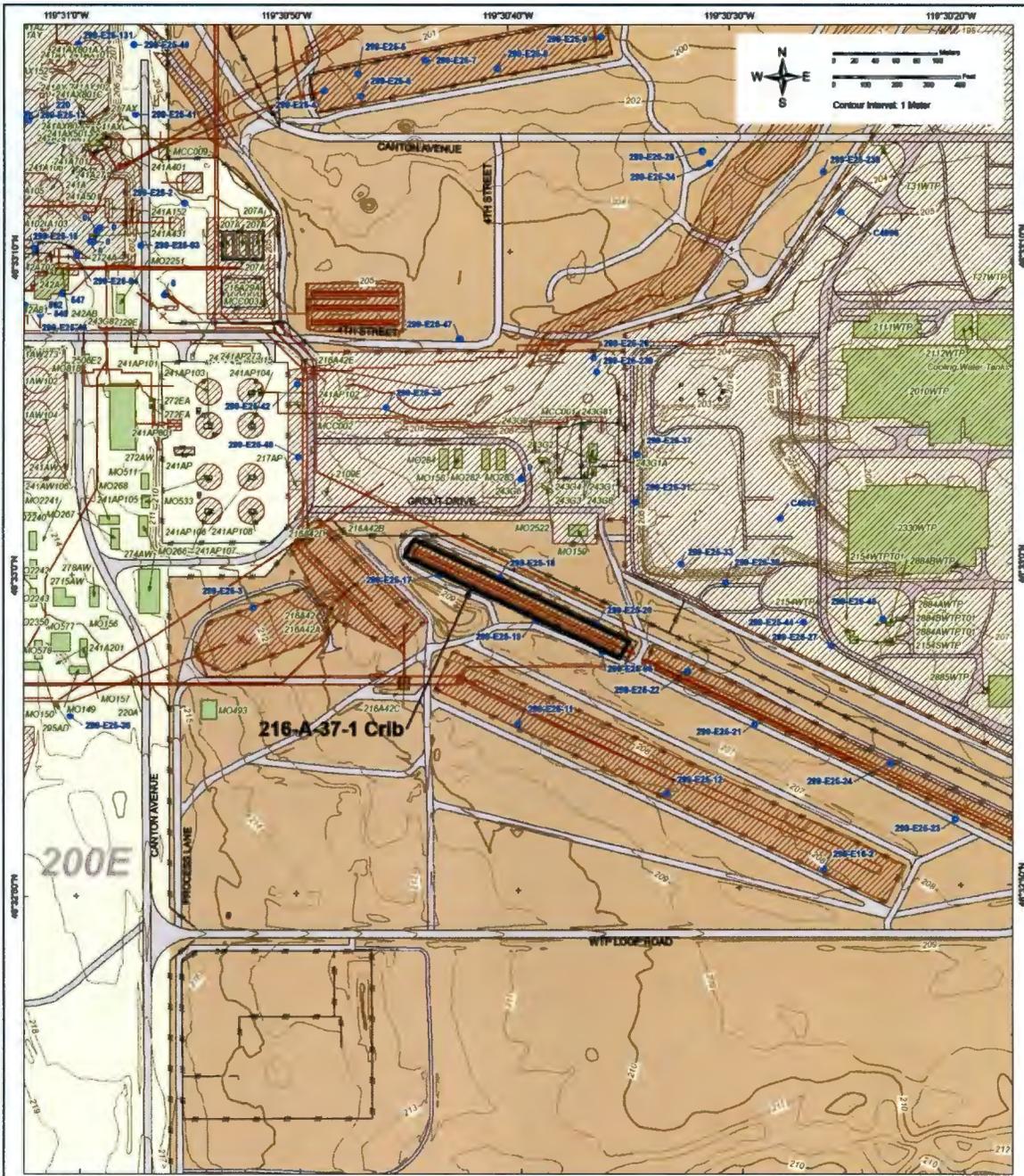
The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly surveillances.



November 2017. Southeastern end of the 216-A-37-1 Crib.



November 2017. Northwestern end of the 216-A-37-1 Crib.



**The Hanford Site**

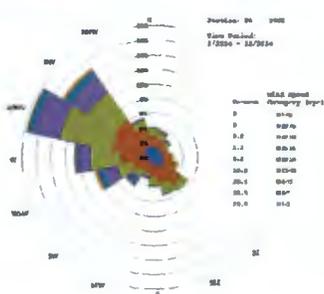


Area Shown on Map

**216-A-37-1 Crib  
In the  
200 East Area**

- TBD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



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Horizontal Datum: NAD83  
Vertical Datum: NAVD83  
Photographic Date:  
1985, Recheck Hanford, Inc.

## **Information and Justification of the Security Waiver for 216-B-3 Main Pond in the 200 East Area**

The Washington State Department of Ecology, WAC 173-303-806, requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

The 216-B-3 Main Pond was an unlined man-made surface impoundment that was used from April 1945 to May 1994. The 216-B-3-3 Ditch was excavated in 1970 to replace the 216-B-3-2 Ditch.

The 216-B-3-3 Ditch and the 216-B-3 Main Pond received wastewater (primarily process and cooling water) from the PUREX Plant, the B Plant Complex, the 242-A Evaporator, and other 200 East Area units. Most of the 216-B-3 Main Pond dangerous waste came from the 216-A-29 Ditch, which drained the PUREX chemical sewer. The Part A Form for the 216-A-29 Ditch lists that the ditch received the regulated off-specification dangerous waste chemical Hydrazine (U133), toxicity characteristic waste (Cadmium, D006), and state only toxic waste (WT02).

The 216-B-3 Main Pond and the 216-B-3-3 Ditch were decommissioned, backfilled and interim stabilized in 1994. The area has been re-vegetated. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock which may enter the pond and ditch areas. The pond and ditch have no structures nor equipment.

The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly surveillances.



November 2017. West part of the 216-B-3 Main Pond. Photo was taken facing east.



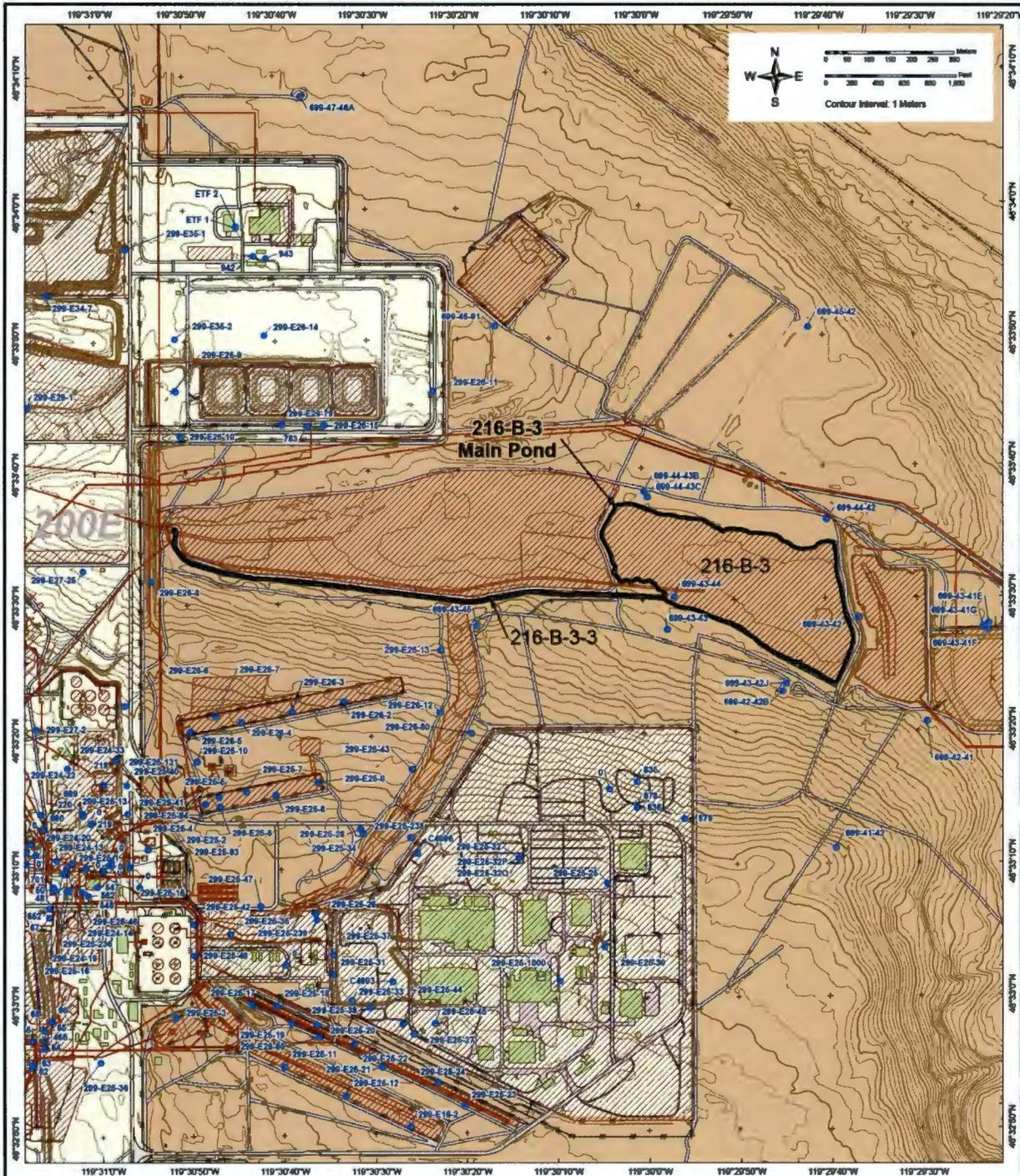
November 2017. East part of the 216-B-3 Main Pond. Photo was taken facing west.



November 2017. 216-B-3-3 Ditch was located between the roads. Photo was taken facing west.



November 2017. West end of 216-B-3-3 Ditch. Photo was taken facing southeast.



**The Hanford Site**

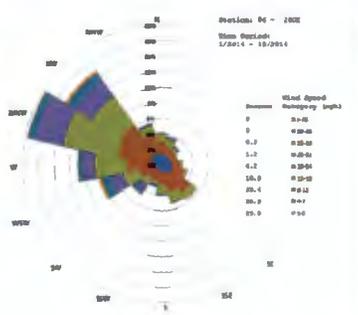


Area Shown on Map

**216-B-3  
Main Pond  
in the  
200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Area
- Hanford Facility

- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings & Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



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 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

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 Vertical Datum: NAVD83  
 Topographic Date:  
 1994, Bestfit Hanford, Inc.

## **Information and Justification of the Security Waiver for 216-B-63 Trench in the 200 East Area**

The Washington State Department of Ecology, WAC 173-303-806, requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

The 216-B-63 Trench was an open, unlined man-made surface impoundment that was closed at one end. The trench received B Plant chemical sewer waste and cooling water from several sources. This unit also includes the 200-E-191-PL Pipeline. The 216-B-63 Trench began waste management operation in March of 1970. All liquid flows to the trench ceased in 1992.

The 216-B-63 Trench is a dangerous waste management unit (DWMU) because it received corrosive mixed waste (D002) from the regeneration of demineralizer columns in B Plant.

The trench was backfilled with clean soil in November 1994. The weir box at the end of the pipeline was filled with cement in December 1994. The area has been re-vegetated. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock which may enter the trench area.

The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly surveillances.



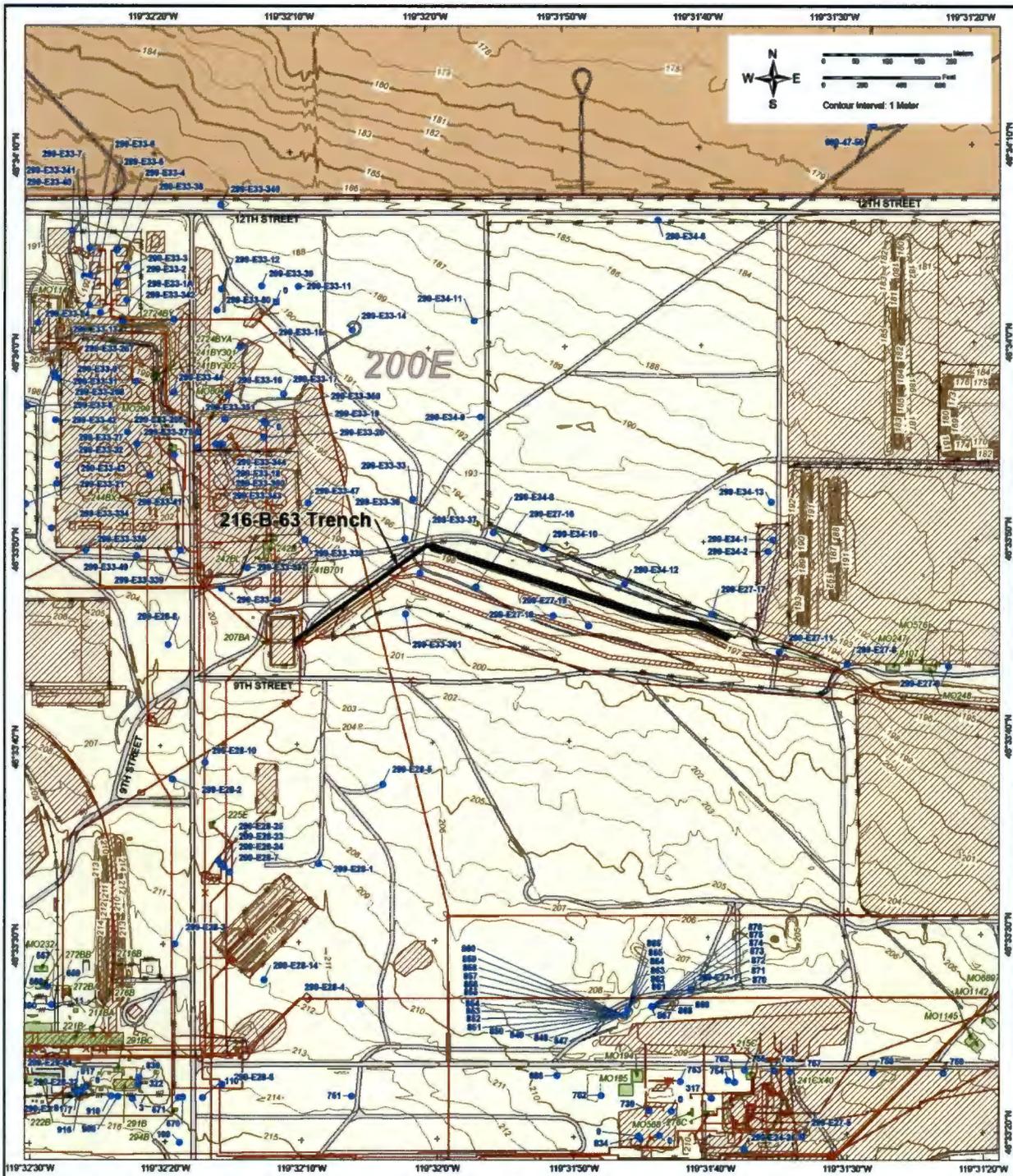
November 2017. Head end of the 216-B-63 Trench. Photo was taken facing east.



November 2017. East end of the 216-B-63 Trench. Photo was taken facing west.



November 2017. 200-E-191-PL pipeline is located under the row of posts along the road. Photo was taken facing northeast.



**The Hanford Site**



Area Shown on Map

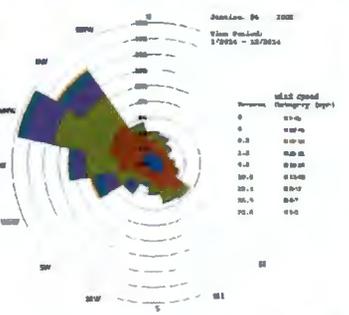
**216-B-63 Trench in the 200 East Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility
- SWMUs and Known Releases
- Linear SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings & Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences

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 Vertical Datum: NAVD83  
 Topographic Data:  
 Vack, Inc./Hanford, Inc.



## **Information and Justification of the Security Waiver for 216-S-10 Pond and Ditch in the 200 West Area**

The Washington State Department of Ecology, WAC 173-303-806, requires that the following must be demonstrated to support a request for waiver of the security procedures and equipment:

- Physical contact with waste, structure, or equipment within the active portion of the facility will not injure persons or livestock that may enter the active portion of a facility.
- Disturbance of the waste or equipment within the active portion(s) of the facility by persons or livestock will not cause a violations of the Dangerous Waste Regulations, Chapter 173-303.

The 216-S-10 Pond and Ditch was a disposal surface impoundment (D83). The site started receiving waste in 1951.

The 216-S-10 Pond and Ditch received one documented discharge consisted of simulated double-shell tank slurry, which exhibited the dangerous waste characteristics of ignitability (D001), corrosivity (D002), toxicity characteristic waste (Chromium, D007), and toxic state-only waste (WT02). Approximately 1,000 pounds (450 kilograms) of dangerous waste were discharged to the unit.

The pond and the southwestern part of the ditch was backfilled and stabilized in 1984. These areas have been re-vegetated. The remaining portion of the ditch remained active and received the last non-regulated wastewater discharge in October 1991. The manhole at the outfall of the supply pipeline was filled with concrete in 1994. Therefore, physical contact with the waste is not possible for unknowing or unauthorized persons or livestock which may enter the pond and ditch area. The grouted manhole is the only physical structure.

The TSD Unit Group is isolated from the public by terrain and access limitations. At this time, the unit is only accessed for the purpose of quarterly surveillances.



November 2017. Northeast end of the 216-S-10 Pond. Photo was taken facing southwest.



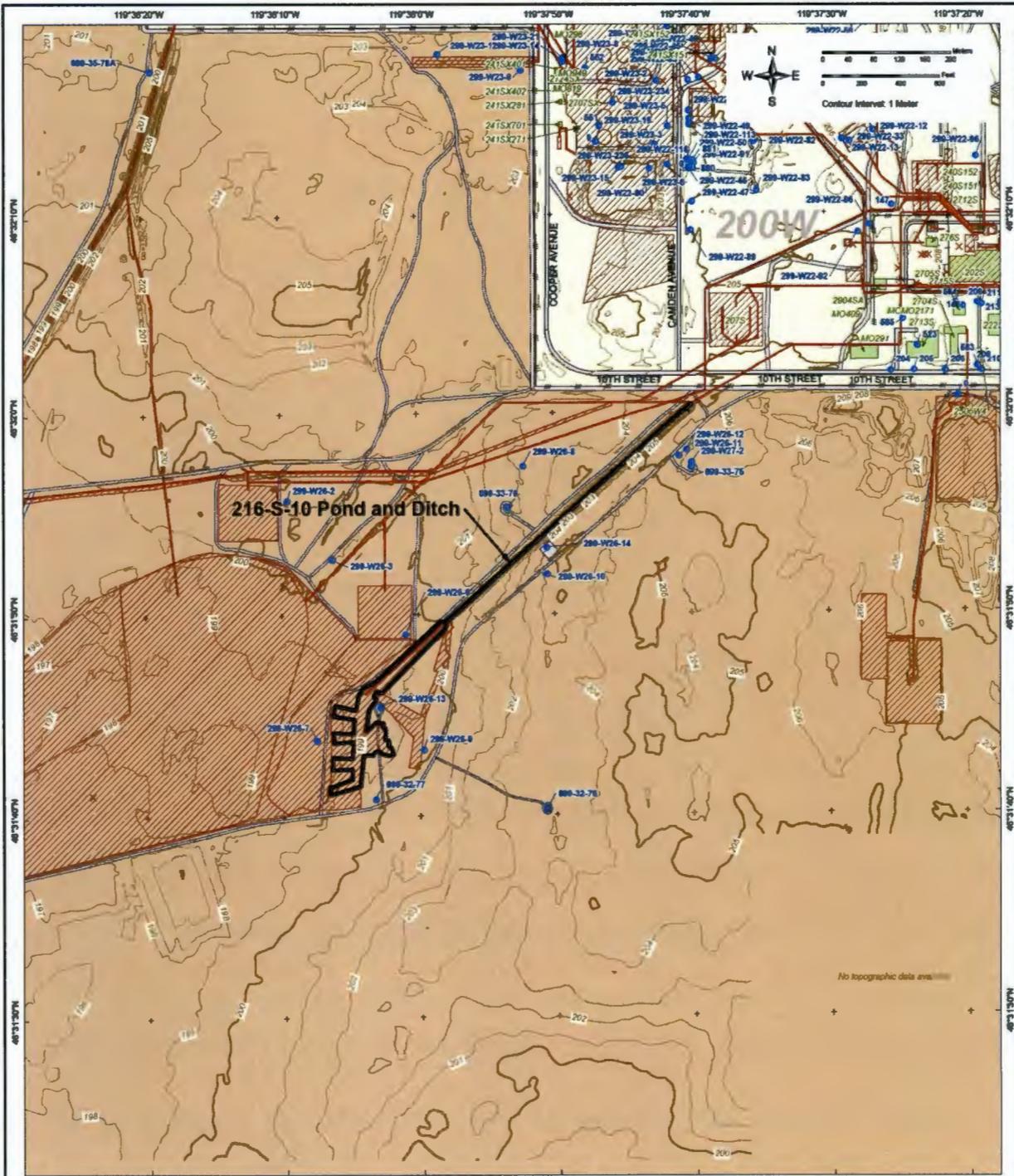
November 2017. The finger area part of the 216-S-10 Pond. Photo was taken facing south.



November 2017. Southwestern end of 216-S-10 Ditch at the 216-S-10 Pond. Photo was taken facing northeast.



November 2017. 216-S-10 Ditch. Photo was taken facing north.



**The Hanford Site**

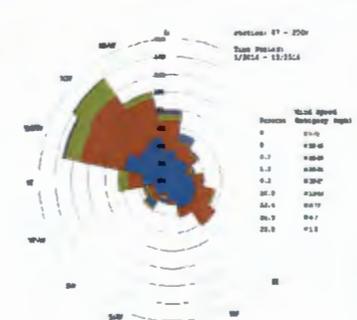


Area Shown on Map

**216-S-10 Pond and Ditch in the 200 West Area**

- TSD Unit Group Boundary
- Contours at 1 Meter Intervals
- Depression Contours at 1 Meter Intervals
- Wells
- DOE Operating Areas
- Hanford Facility

- SWMUs and Known Releases
- Lower SWMUs and Known Releases
- Spot SWMUs and Known Releases
- Buildings and Mobiles
- Structures
- Major Roads
- Service Roads
- Railroads
- Fences



Prepared for:  
 US DEPARTMENT OF ENERGY  
 RICHLAND OPERATIONS OFFICE

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 Vertical Datum: MVD89  
 Topographic Data: 1996, Boulder Hanford, Inc.