STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
3100 Port of Benton Blvd • Richland, WA 99354 • (509) 372-7950
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June 8, 2011 11-NWP-057

Matthew S. McCormick, Manager
U.S. Department of Energy
Richland Operations Office
P.O. Box 550, A5-11
Richland, Washington 99352

Re: Approval of the *Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility, Part A Form, Revision 2*

Dear Mr. McCormick:

The Department of Ecology (Ecology) has reviewed and approved the *Liquid Retention Facility and 200 Area Effluent Treatment Facility* (LERF/200 Area ETF), Part A Form, Revision 2. Please submit the certified Part A form with the Class 1 permit modification package to be submitted by July 10, 2011.

The modification approved includes updating Section X with the current applicable air and water permits that pertain to LERF/200 Area ETF, updating the Section XII process codes and storage capacities, updating the Section XVII photographs, and updating the Section XV maps.

A copy of the approved Part A Form, Revision 2 is enclosed. If there are any questions, please contact Rick Bond at 509-372-7885.

Sincerely,

Ron Skinarland
Section Manager
Waste Management Section

FB/jvs
Enclosure: LERF/200 Area ETF Part A
cc: See page 2

T-2-8

cc: Dennis Faulk, EPA
Tony McKarns, USDOE-RL
Jennifer Ollero, MSA
Stuart Harris, CTUIR
Gabriel Bohnee, NPT
Russell Jim, YN
Lela Buck, Wanapum
Susan Leckband, HAB
Ken Niles, ODOE
Administrative Record: LERF/200 Area ETF
Environmental Portal
USDOE-RL Correspondence Control

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Addendum A Part A Form

Date Received	Reviewed by: Frederick A. Bond	Date: 06/01/2011
Month Day Year	Approved by:	Date: 06/08/2011

I. This form is submitted to: (place an "X" in the appropriate box)

☒	Request modification to a final status permit (commonly called a "Part B" permit)
☐	Request a change under interim status
☐	Apply for a final status permit. This includes the application for the initial final status permit for a site or for a permit renewal (i.e., a new permit to replace an expiring permit).
☐	Establish interim status because of the wastes newly regulated on: (Date)
	List waste codes:

II. EPA/State ID Number

WA7890008967

III. Name of Facility

US Department of Energy - Hanford Facility

IV. Facility Location (Physical address not P.O. Box or Route Number)

A. Street

825 Jadwin

City or Town	State	ZIP Code
Richland	WA	99352

County Code (if known)	County Name
005	Benton

B. Land Type	C. Geographic Location Latitude (degrees, mins, secs)	Longitude (degrees, mins, secs)	D. Facility Existence Date Month Day Year
F	Refer to TOPO Map (Section XV.)		03/02/1943

V. Facility Mailing Address

Street or P.O. Box

P.O. Box 550

City or Town	State	ZIP Code
Richland	WA	99352

VI. Facility contact (Person to be contacted regarding waste activities at facility)		
Name (last)	**(first)**	
McCormick	Matthew	
Job Title	**Phone Number (area code and number)**	
Manager	(509) 376-7395	
Contact Address		
Street or P.O. Box		
P.O. Box 550		
City or Town	**State**	**ZIP Code**
Richland	WA	99352

VII. Facility Operator Information		
A. Name		**Phone Number**
Department of Energy Owner/Operator CH2M HILL Plateau Remediation Company Co-Operator for LERF & 200 Area ETF*		(509) 376-7395 (509) 376-0556*
Street or P.O. Box		
P.O. Box 550 P.O. Box 1600 *		
City or Town	**State**	**ZIP Code**
Richland	WA	99352
B. Operator Type	F	
C. Does the name in VII.A reflect a proposed change in operator?	☐ Yes ☒ No Co-Operator* change	
If yes, provide the scheduled date for the change:	**Month** 1 0	**Day** 0 1 **Year** 2 0 0 8
D. Is the name listed in VII.A. also the owner? If yes, skip to Section VIII.C.	☐ Yes ☒ No	

VIII. Facility Owner Information		
A. Name		**Phone Number (area code and number)**
Matthew S. McCormick, Operator/Facility-Property Owner		(509) 376-7395
Street or P.O. Box		
P.O. Box 550		
City or Town	**State**	**ZIP Code**
Richland	WA	99352
B. Owner Type	F	
C. Does the name in VIII.A reflect a proposed change in owner?	☐ Yes ☒ No	
If yes, provide the scheduled date for the change:	**Month** **Day** **Year**	

IX. NAICS Codes (5/6 digit codes)

A. First		B. Second	
562211	Waste Treatment & Disposal	924110	Administration of Air & Water Resource & Solid Waste Management Programs
C. Third		**D. Fourth**	
541713	Research & Development in the Physical, Engineering, & Life Sciences		

X. Other Environmental Permits (see instructions)

A. Permit Type	B. Permit Number	C. Description
E	TSCA03-10-22	TSCA approval, 40 CFR 761
E	WCM-127	40 CFR 761.61(c), TSCA risk-based approval 2003-10-22
E	DEO7NWP-003	WAC 173-400, General Regulations for Air Pollution Sources/ WAC 173-460, Controls for New Sources of Toxic Air Pollutants
E	AIR-06-104	WAC 246-247, Radiation Protection -- Air Emissions
U	ST 4500	WAC 173-216, State Waste Discharge Permit Program, 200 Area Effluent Treatment Facility (ETF) and State-Approved Land Disposal Site (SALDS)
U	ST 4511	WAC 173-216, State Waste Discharge Permit Program, Sitewide Permit for miscellaneous streams

XI. Nature of Business (provide a brief description that includes both dangerous waste and non-dangerous waste areas and activities)

Construction of the Liquid Effluent Retention Facility (LERF) began in 1990. Waste management operations began at LERF in April 1994. Construction of the 200 Area Effluent Treatment Facility (ETF) began in 1992. Waste management operations began at ETF in November of 1995.

The LERF and ETF comprise an aqueous waste treatment system located in the 200 East Area that provides storage and treatment for a variety of aqueous mixed waste. This aqueous waste includes process condensate from the 242-A Evaporator and other aqueous waste generated from onsite remediation and waste management activities.

The LERF consists of three lined surface impoundments, or basins. Aqueous waste from LERF is pumped to the ETF for treatment in a series of process units, or systems, that remove or destroy dangerous waste constituents. The treated effluent is discharged to a State-Approved Land Disposal Site (SALDS) north of the 200 West Area, under the authority of a Washington State Waste Discharge Permit (ST4500) and the Final Delisting (40 CFR 261, Appendix IX, Table 2)

Sludge that accumulates in the bottoms of ETF process tanks is removed periodically and placed into containers. The waste is solidified by decanting the supernate from the container and the remainder of the liquid is allowed to evaporate, or absorbents are added, as necessary, to address the residual liquid. The process design capacity for treatment of waste in containers (T04) is 18,927 liters per day.

EXAMPLE FOR COMPLETING ITEMS XII and XIII (shown in lines numbered X-1, X-2, and X-3 below): A facility has two storage tanks that hold 1200 gallons and 400 gallons respectively. There is also treatment in tanks at 20 gallons/hr. Finally, a one-quarter acre area that is two meters deep will undergo *in situ vitrification.*

Section XII. Process Codes and Design Capacities								Section XIII. Other Process Codes								
Line Number		A. Process Codes (enter code)			B. Process Design Capacity 1. Amount	B. Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	Line Number		A. Process Codes (enter code)			B. Process Design Capacity 1. Amount	B. Process Design Capacity 2. Unit of Measure (enter code)	C. Process Total Number of Units	D. Process Description
X	1	S	0	2	1,600	G	002	X	1	T	0	4	700	C	001	In situ vitrification
X	2	T	0	3	20	E	001									
X	3	T	0	4	700	C	001									
	1	S	0	4	88,500,000	L	003		1	T	0	4	18,927	V	001	container treatment
	2	T	0	2	88,500,000	V	003		2							
	3	S	0	2	9,652,810	L	019		3							
	4	T	0	1	817,646	V	019		4							
	5	S	0	1	147,630	L	003		5							
	6	T	0	4	18,927	V	001		6							
	7								7							
	8								8							
	9								9							
1	0							1	0							
1	1							1	1							
1	2							1	2							
1	3							1	3							
1	4							1	4							
1	5							1	5							
1	6							1	6							
1	7							1	7							
1	8							1	8							
1	9							1	9							
2	0							2	0							
2	1							2	1							
2	2							2	2							
2	3							2	3							
2	4							2	4							
2	5							2	5							

XIV. Description of Dangerous Wastes

Example for completing this section: A facility will receive three non-listed wastes, then store and treat them on-site. Two wastes are corrosive only, with the facility receiving and storing the wastes in containers. There will be about 200 pounds per year of each of these two wastes, which will be neutralized in a tank. The other waste is corrosive and ignitable and will be neutralized then blended into hazardous waste fuel. There will be about 100 pounds per year of that waste, which will be received in bulk and put into tanks.

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Processes (1) Process Codes (enter)	D. Processes (2) Process Description [If a code is not entered in D (1)]
X 1	D 0 0 2	400	P	S 0 1 T 0 1	
X 2	D 0 0 1	100	P	S 0 2 T 0 1	
X 3	D 0 0 2				Included with above
1	D 0 0 1	88,497,000	K	S 0 4 T 0 2	
2	D 0 0 2		K	S 0 4 T 0 2	
3	D 0 0 3		K	S 0 4 T 0 2	
4	D 0 0 4		K	S 0 4 T 0 2	
5	D 0 0 5		K	S 0 4 T 0 2	
6	D 0 0 6		K	S 0 4 T 0 2	
7	D 0 0 7		K	S 0 4 T 0 2	
8	D 0 0 8		K	S 0 4 T 0 2	
9	D 0 0 9		K	S 0 4 T 0 2	
10	D 0 1 0		K	S 0 4 T 0 2	
11	D 0 1 1		K	S 0 4 T 0 2	
12	D 0 1 8		K	S 0 4 T 0 2	
13	D 0 1 9		K	S 0 4 T 0 2	
14	D 0 2 2		K	S 0 4 T 0 2	
15	D 0 2 8		K	S 0 4 T 0 2	
16	D 0 2 9		K	S 0 4 T 0 2	
17	D 0 3 0		K	S 0 4 T 0 2	
18	D 0 3 3		K	S 0 4 T 0 2	
19	D 0 3 4		K	S 0 4 T 0 2	
20	D 0 3 5		K	S 0 4 T 0 2	
21	D 0 3 6		K	S 0 4 T 0 2	
22	D 0 3 8		K	S 0 4 T 0 2	
23	D 0 3 9		K	S 0 4 T 0 2	
24	D 0 4 0		K	S 0 4 T 0 2	
25	D 0 4 1		K	S 0 4 T 0 2	

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process	
				(1) Process Codes (enter)	(2) Process Description [If a code is not entered in D (1)]
26	D 0 4 3		K	S 0 4 T 0 2	
27	F 0 0 1		K	S 0 4 T 0 2	
28	F 0 0 2		K	S 0 4 T 0 2	
29	F 0 0 3		K	S 0 4 T 0 2	
30	F 0 0 4		K	S 0 4 T 0 2	
31	F 0 0 5		K	S 0 4 T 0 2	
32	F 0 3 9		K	S 0 4 T 0 2	
33	W T 0 1		K	S 0 4 T 0 2	
34	W T 0 2		K	S 0 4 T 0 2	
35	D 0 0 1	298,434,296	K	T 0 1	
36	D 0 0 2		K	T 0 1	
37	D 0 0 3		K	T 0 1	
38	D 0 0 4		K	T 0 1	
39	D 0 0 5		K	T 0 1	
40	D 0 0 6		K	T 0 1	
41	D 0 0 7		K	T 0 1	
42	D 0 0 8		K	T 0 1	
43	D 0 0 9		K	T 0 1	
44	D 0 1 0		K	T 0 1	
45	D 0 1 1		K	T 0 1	
46	D 0 1 8		K	T 0 1	
47	D 0 1 9		K	T 0 1	
48	D 0 2 2		K	T 0 1	
49	D 0 2 8		K	T 0 1	
50	D 0 2 9		K	T 0 1	
51	D 0 3 0		K	T 0 1	
52	D 0 3 3		K	T 0 1	
53	D 0 3 4		K	T 0 1	
54	D 0 3 5		K	T 0 1	
55	D 0 3 6		K	T 0 1	
56	D 0 3 8		K	T 0 1	
57	D 0 3 9		K	T 0 1	

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process (1) Process Codes (enter)	D. Process (2) Process Description [If a code is not entered in D (1)]
58	D040		K	T01	
59	D041		K	T01	
60	D043		K	T01	
61	F001		K	T01	
62	F002		K	T01	
63	F003		K	T01	
64	F004		K	T01	
65	F005		K	T01	
66	F039		K	T01	
67	WT01		K	T01	
68	WT02		K	T01	
69	D001	30,433,326	K	S02	
70	D002		K	S02	
71	D003		K	S02	
72	D004		K	S02	
73	D005		K	S02	
74	D006		K	S02	
75	D007		K	S02	
76	D008		K	S02	
77	D009		K	S02	
78	D010		K	S02	
79	D011		K	S02	
80	D018		K	S02	
81	D019		K	S02	
82	D022		K	S02	
83	D028		K	S02	
84	D029		K	S02	
85	D030		K	S02	
86	D033		K	S02	
87	D034		K	S02	
88	D035		K	S02	
89	D036		K	S02	

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process	
				(1) Process Codes (enter)	(2) Process Description [If a code is not entered in D (1)]
90	D 0 3 8		K	S 0 2	
91	D 0 3 9		K	S 0 2	
92	D 0 4 0		K	S 0 2	
93	D 0 4 1		K	S 0 2	
94	D 0 4 3		K	S 0 2	
95	F 0 0 1		K	S 0 2	
96	F 0 0 2		K	S 0 2	
97	F 0 0 3		K	S 0 2	
98	F 0 0 4		K	S 0 2	
99	F 0 0 5		K	S 0 2	
100	F 0 3 9		K	S 0 2	
101	W T 0 1		K	S 0 2	
102	W T 0 2		K	S 0 2	
103	D 0 0 1	1,986,735	K	S 0 1	Includes Debris
104	D 0 0 2		K	S 0 1	Includes Debris
105	D 0 0 3		K	S 0 1	Includes Debris
106	D 0 0 4		K	S 0 1	Includes Debris
107	D 0 0 5		K	S 0 1	Includes Debris
108	D 0 0 6		K	S 0 1	Includes Debris
109	D 0 0 7		K	S 0 1	Includes Debris
110	D 0 0 8		K	S 0 1	Includes Debris
111	D 0 0 9		K	S 0 1	Includes Debris
112	D 0 1 0		K	S 0 1	Includes Debris
113	D 0 1 1		K	S 0 1	Includes Debris
114	D 0 1 8		K	S 0 1	Includes Debris
115	D 0 1 9		K	S 0 1	Includes Debris
116	D 0 2 2		K	S 0 1	Includes Debris
117	D 0 2 8		K	S 0 1	Includes Debris
118	D 0 2 9		K	S 0 1	Includes Debris
119	D 0 3 0		K	S 0 1	Includes Debris
120	D 0 3 3		K	S 0 1	Includes Debris
121	D 0 3 4		K	S 0 1	Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No. (enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process	
				(1) Process Codes (enter)	(2) Process Description [If a code is not entered in D (1)]
122	D035		K	S01	Includes Debris
123	D036		K	S01	Includes Debris
124	D038		K	S01	Includes Debris
125	D039		K	S01	Includes Debris
126	D040		K	S01	Includes Debris
127	D041		K	S01	Includes Debris
128	D043		K	S01	Includes Debris
129	F001		K	S01	Includes Debris
130	F002		K	S01	Includes Debris
131	F003		K	S01	Includes Debris
132	F004		K	S01	Includes Debris
133	F005		K	S01	Includes Debris
134	F039		K	S01	Includes Debris
135	WT01		K	S01	Includes Debris
136	WT02		K	S01	Includes Debris
137	D001	81,310	K	T04	Includes Debris
138	D002		K	T04	Includes Debris
139	D003		K	T04	Includes Debris
140	D004		K	T04	Includes Debris
141	D005		K	T04	Includes Debris
142	D006		K	T04	Includes Debris
143	D007		K	T04	Includes Debris
144	D008		K	T04	Includes Debris
145	D009		K	T04	Includes Debris
146	D010		K	T04	Includes Debris
147	D011		K	T04	Includes Debris
148	D018		K	T04	Includes Debris
149	D019		K	T04	Includes Debris
150	D022		K	T04	Includes Debris
151	D028		K	T04	Includes Debris
152	D029		K	T04	Includes Debris
153	D030		K	T04	Includes Debris

EPA/State ID Number	W	A	7	8	9	0	0	0	8	9	6	7

Continuation of Section XIV. Description of Dangerous Waste

Line Number	A. Dangerous Waste No. (enter code)				B. Estimated Annual Quantity of Waste	C. Unit of Measure (enter code)	D. Process														D. Process (2) Process Description [If a code is not entered in D (1)]
							(1) Process Codes (enter)														
154	D	0	3	3		K	T	0	4												Includes Debris
155	D	0	3	4		K	T	0	4												Includes Debris
156	D	0	3	5		K	T	0	4												Includes Debris
157	D	0	3	6		K	T	0	4												Includes Debris
158	D	0	3	8		K	T	0	4												Includes Debris
159	D	0	3	9		K	T	0	4												Includes Debris
160	D	0	4	0		K	T	0	4												Includes Debris
161	D	0	4	1		K	T	0	4												Includes Debris
162	D	0	4	3		K	T	0	4												Includes Debris
163	F	0	0	1		K	T	0	4												Includes Debris
164	F	0	0	2		K	T	0	4												Includes Debris
165	F	0	0	3		K	T	0	4												Includes Debris
166	F	0	0	4		K	T	0	4												Includes Debris
167	F	0	0	5		K	T	0	4												Includes Debris
168	F	0	3	9		K	T	0	4												Includes Debris
169	W	T	0	1		K	T	0	4												Includes Debris
170	W	T	0	2		K	T	0	4												Includes Debris
171																					
172																					
173																					
174																					
175																					
176																					
177																					
178																					
179																					
180																					

XV. Map

Attach to this application a topographic map of the area extending to at least one (1) mile beyond property boundaries. The map must show the outline of the facility; the location of each of its existing and proposed intake and discharge structures; each of its dangerous waste treatment, storage, recycling, or disposal units; and each well where fluids are injected underground. Include all springs, rivers, and other surface water bodies in this map area, plus drinking water wells listed in public records or otherwise known to the applicant within ¼ mile of the facility property boundary. The instructions provide additional information on meeting these requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (refer to Instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment, recycling, and disposal areas; and sites of future storage, treatment, recycling, or disposal areas (refer to Instructions for more detail).

XVIII. Certifications

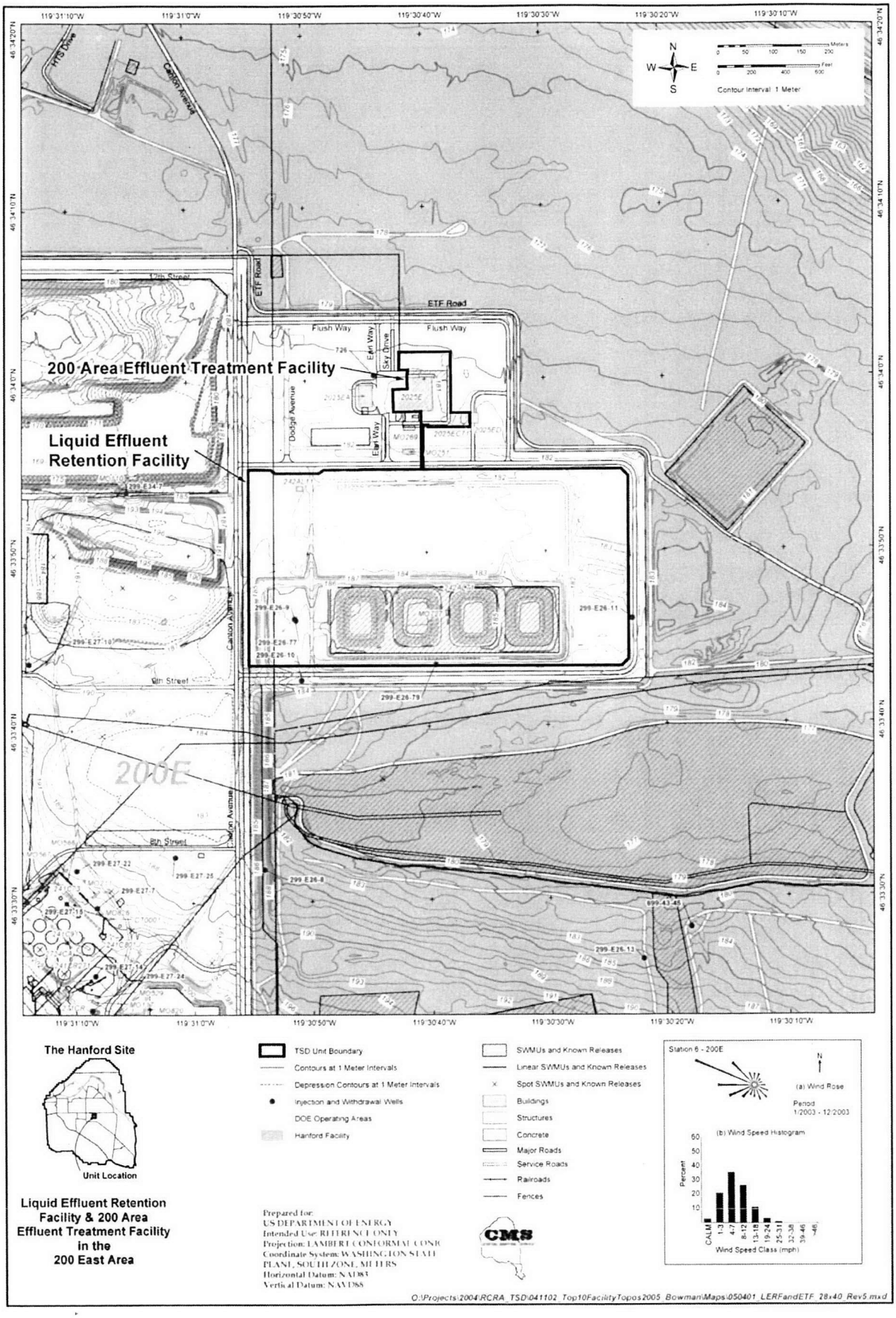
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage 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.

Operator Name and Official Title (type or print) Matthew S. McCormick, Manager U.S. Department of Energy Richland Operations Office	**Signature** Doug D. Sloop for	**Date Signed** 5/27/11
Co-Operator* Name and Official Title (type or print) John G. Lehew, III President and Chief Executive Officer CH2M HILL Plateau Remediation Company	**Signature**	**Date Signed** 5/14/11
Co-Operator – Address and Telephone Number* P.O. Box 1600 Richland, WA 99352 (509) 376-0556		
Facility-Property Owner Name and Official Title (type or print) Matthew S. McCormick, Manager U.S. Department of Energy Richland Operations Office	**Signature** Doug D. Sloop	**Date Signed** 5/27/11

Comments

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

200 Area Effluent Treatment Facility


200 Area Effluent Treatment Facility
Liquid Effluent Retention Facility
ETF Road
Flush Way
Dodgé Avenue
Carlon Avenue
11th Street
8th Street
200E
Contour Interval 1 Meter
The Hanford Site
Unit Location
Liquid Effluent Retention Facility & 200 Area Effluent Treatment Facility in the 200 East Area
TSD Unit Boundary
Contours at 1 Meter Intervals
Depression Contours at 1 Meter Intervals
Injection and Withdrawal Wells
DOE Operating Areas
Hanford Facility
SWMUs and Known Releases
Linear SWMUs and Known Releases
Spot SWMUs and Known Releases
Buildings
Structures
Concrete
Major Roads
Service Roads
Railroads
Fences
Station 6 - 200E
(a) Wind Rose
Period 1/2003 - 12/2003
(b) Wind Speed Histogram
Percent
Wind Speed Class (mph)
Prepared for:
US DEPARTMENT OF ENERGY
Intended Use: REFERENCE ONLY
Projection: LAMBERT CONFORMAL CONIC
Coordinate System: WASHINGTON STATE PLANE, SOUTH ZONE, METERS
Horizontal Datum: NAD83
Vertical Datum: NAVD88
O:\Projects\2004\RCRA_TSD\041102_Top10FacilityTopos2005_Bowman\Maps\050401_LERFandETF_28x40_Rev5.mxd