

WASTE SITE RECLASSIFICATION FORM

Operable Unit: 300-FF-2

Control No.: 2014-105

Waste Site Code(s)/Subsite Code(s): 300-288:1, Piles of Garnet Sand/Soil Mixture Within Gravel Pit 6

Reclassification Category: Interim Final

Reclassification Status: Closed Out No Action Rejected
RCRA Postclosure Consolidated None

Approvals Needed: DOE Ecology EPA

Description of current waste site condition:

The 300-288:1, Piles of Garnet Sand/Soil Mixture Within Gravel Pit 6 subsite, part of the 300-288, Disposal Sites Within Gravel Pit 6 waste site, was identified as a waste site requiring remediation in the *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington* (300 Area Final ROD), U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2013). The 300-288 waste site was previously included as a "plug-in" site in the Tri-Party Agreement Administrative Record *Fact Sheet: 300 Area "Plug-In" Waste Sites for Fiscal Year 2011*, U.S. Department of Energy, Richland Operations Office, Richland, Washington (DOE-RL 2011), in accordance with the *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington* (300-FF-2 ROD), U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2001), and the *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington (EPA 2009).

The 300-288:1 subsite is located west of the 300 Area on the west side of Highway Route 4S and within the rejected 600-249 (gravel pit 6) waste site. The 300-288:1 subsite consists of two piles of garnet sand mixed with soil, each estimated to be 5% garnet sand and 95% soil.

The 300-288:1 subsite was recommended for remove, treat, and dispose (DOE-RL 2011); however, no characterization samples were collected at that time. A subsequent in-process composite sample collected of garnet sand and soil, and analyzed for metals, including mercury, indicates that contamination above cleanup levels (CULs) does not exist at the site; therefore, no action is required.

Basis for reclassification:

The in-process sample results support a reclassification of this site to Final No Action. The garnet sand left in place at the 300-288:1 subsite does not pose a risk to human health or the environment.

Additional information is provided in the *Supporting Information for Reclassification of the 300-288:1, Piles of Garnet Sand/Soil Mixture Within Gravel Pit 6 Subsite* (attached).

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Operable Unit: 300-FF-2

Control No.: 2014-105

Waste Site Code(s)/Subsite Code(s): 300-288:1, Piles of Garnet Sand/Soil Mixture Within Gravel Pit 6

Regulator comments:

(This area is currently blank for regulator comments.)

Waste Site Controls:

Engineered Controls: Yes No Institutional Controls: Yes No O&M Requirements: Yes No

If any of the Waste Site Controls are checked Yes, specify control requirements including reference to the Record of Decision, TSD Closure Letter, or other relevant documents:

(This area is currently blank for control requirements.)

		11/30/14
M. S. French DOE Federal Project Director (printed)	Signature	Date
N/A		_____
Ecology Project Manager (printed)	Signature	Date
B. Simes		12/15/14
EPA Project Manager (printed)	Signature	Date

**SUPPORTING INFORMATION FOR RECLASSIFICATION OF THE
300-288:1, PILES OF GARNET SAND/SOIL MIXTURE WITHIN
GRAVEL PIT 6 SUBSITE**

Attachment to Waste Site Reclassification Form 2014-105

November 2014

GENERAL SITE INFORMATION AND BACKGROUND

The 300-288:1, Piles of Garnet Sand/Soil Mixture Within Gravel Pit 6 subsite, part of the 300-288, Disposal Sites Within Gravel Pit 6 waste site, was identified as a waste site requiring remediation in the *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington* (300 Area Final ROD) (EPA 2013). The 300-288 waste site was previously included as a “plug-in” site in the Tri-Party Agreement Administrative Record *Fact Sheet: 300 Area “Plug-In” Waste Sites for Fiscal Year 2011* (DOE-RL 2011) in accordance with the *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington* (300-FF-2 ROD) (EPA 2001) and the *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision* (EPA 2009).

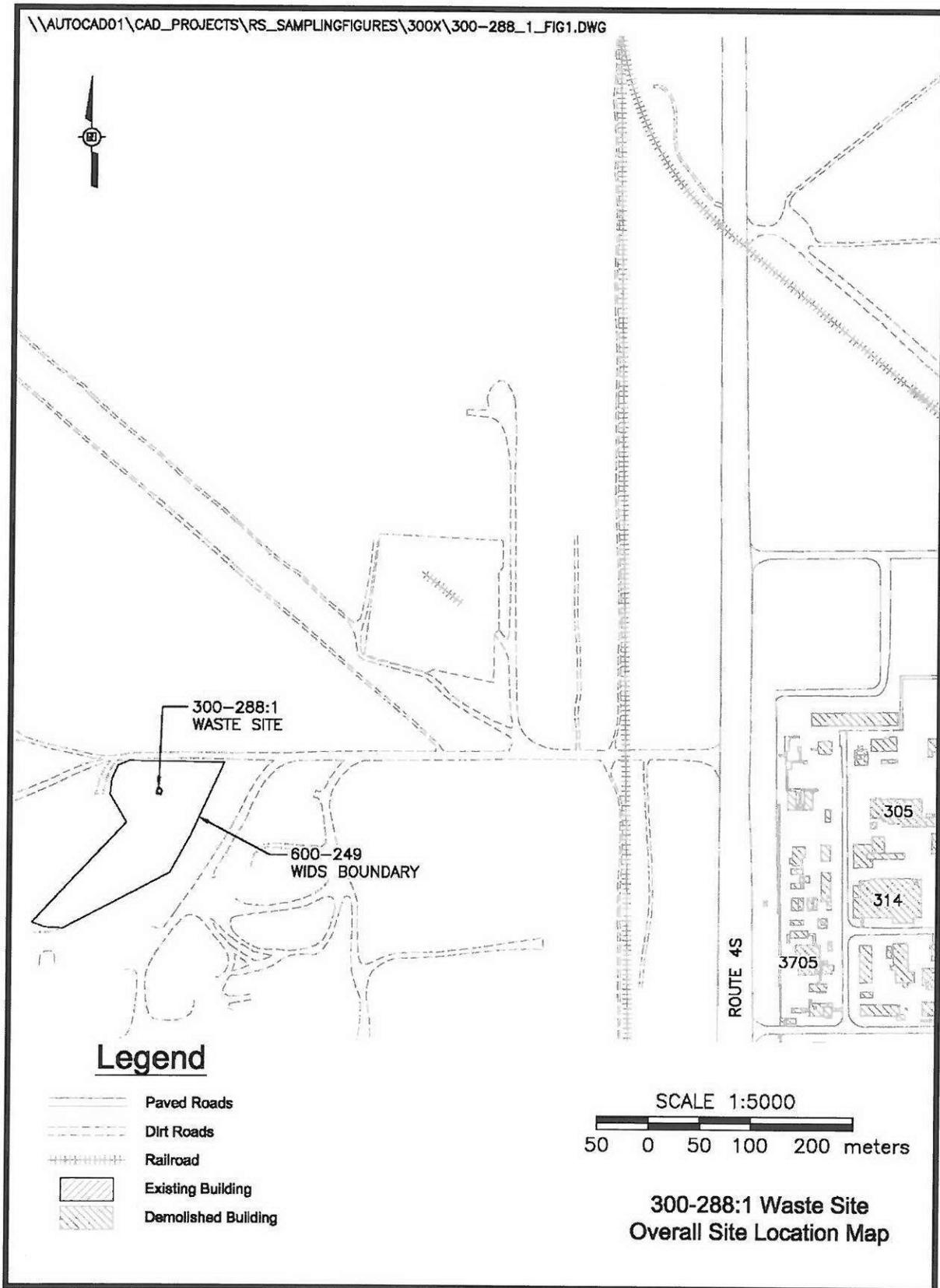
The 300-288:1 subsite consists of two piles of garnet sand (Figure 1) within a 5-m (16.4-ft)-diameter area. The total volume is approximately 15 cubic meters (20 cubic yards), and each pile is estimated to be 5% garnet sand and 95% soil. Garnet sand was commonly used in grit-blasting operations to clean rust, paint, or contamination from the surface of metal components. The garnet sand material is not a hazardous substance, but there is potential for contamination from the surface material that was removed by grit blasting.

The 300-288:1 subsite is located within the “Rejected” 600-249, Debris Within Gravel Pit 6 waste site boundary. Gravel Pit 6 is located west of the 300 Area, on the west side of Highway Route 4S (Figure 2).

Figure 1. Photograph of the 300-288:1 Garnet Sand/Soil Piles.



Figure 2. The 300-288:1 Subsite Location Map.



SAMPLING ACTIVITIES

An in-process composite sample (J1TWJ3) consisting of 30 aliquots of garnet sand material was collected on June 24, 2014. The sample was collected to support a determination that residual contaminant concentrations at this site meet the cleanup levels specified in the 300 Area Final ROD (EPA 2013). A summary of the composite sample collected is provided in Table 1.

Table 1. In-Process Sample Summary for the 300-188:2 Subsite.

Sample Location	Sample Type	HEIS Number	Sample Date	Washington State Plane Coordinates (m)	Sample Analysis
300-288:1	Composite	J1TWJ3	6/24/2014	N 116216.5 E 593026.9	ICP metals ^a , mercury

Source: Field logbook EL-1663-06 (WCH 2014).

^a Analysis for the expanded list of ICP metals included aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium (total), cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, tin, uranium, vanadium, zinc, and zirconium in the analytical results package.

HEIS = Hanford Environmental Information System

ICP = inductively coupled plasma

The composite sample was submitted for full protocol laboratory analysis and was analyzed using U.S. Environmental Protection Agency (EPA)-approved analytical methods as shown in Table 2.

Table 2. 300-288:1 Subsite Laboratory Analytical Methods.

Analytical Method	Contaminants of Concern
ICP metals ^a – EPA Method 6010	Metals
Mercury – EPA Method 7471	Mercury

^a Analysis was performed for the expanded list of ICP metals to include aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium (total), cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, tin, uranium, vanadium, zinc, and zirconium in the analytical results package.

EPA = U.S. Environmental Protection Agency

ICP = inductively coupled plasma

Contaminants of Concern

The contaminants of concern (COCs) were determined based on the likely use of the garnet sand material. Because garnet sand was commonly used in grit-blasting operations to clean rust and paint from metal components, the COCs were identified as inductively coupled plasma (ICP) metals and mercury.

Sample Results

An in-process composite sample collected of garnet sand and analyzed for metals, including mercury, indicates that contamination above cleanup levels (CULs) does not exist at the site; therefore, no action is required. The laboratory-reported sample results for all constituents are stored in a project-specific database prior to archival in the Hanford Environmental Information System and are included in Appendix A.

SUMMARY FOR FINAL NO ACTION DETERMINATION

The in-process sampling results support a reclassification of the 300-288:1 subsite to Final No Action.

REFERENCES

- DOE-RL, 2011, *Fact Sheet: 300 Area "Plug-In" Waste Sites for Fiscal Year 2011*, AR/PIR Accession Number 1109011799, August 2011, U.S. Department of Energy, Richland Operations Office, Richland, Washington.
- EPA, 2001, *Interim Action Record of Decision for the 300-FF-2 Operable Unit, Hanford Site, Benton County, Washington*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.
- EPA, 2009, *Explanation of Significant Differences for the 300-FF-2 Operable Unit Interim Remedial Action Record of Decision*, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.
- EPA, 2013, *Hanford Site 300 Area, Record of Decision for 300-FF-2 and 300-FF-5, and Record of Decision Amendment for 300-FF-1, Hanford Site, Benton County, Washington*, November 2013, U.S. Environmental Protection Agency, Region 10, Seattle, Washington.
- WAC 173-340, "Model Toxics Control Act – Cleanup," *Washington Administrative Code*, as amended.
- WCH, 2014, *D4 Waste Site Miscellaneous Sampling*, Logbook EL-1663-06, pp. 12-14, Washington Closure Hanford, Washington.

APPENDIX A
IN-PROCESS SAMPLE RESULTS

300-288-1 Metals Data

Site Code	HEIS Sample	Sample Date	Northing	Easting	Aluminum		Antimony		Arsenic		Barium				
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	1440	N	6.39	0.823	B	0.31	0.47	U	0.47	9.53	0.094

Site Code	HEIS Sample	Sample Date	Northing	Easting	Beryllium		Boron		Cadmium		Calcium					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	0.261	B	0.094	1.2	B	0.94	0.159	B	0.094	826	N	7.52

Site Code	HEIS Sample	Sample Date	Northing	Easting	Chromium		Cobalt		Copper		Iron					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	4.43		0.141	1.94		0.141	3.51		0.282	5190		7.52

Site Code	HEIS Sample	Sample Date	Northing	Easting	Lead		Lithium		Magnesium		Manganese					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	4.37		0.31	1.02	BD	0.392	626	N	7.99	80.9	N	0.188

Site Code	HEIS Sample	Sample Date	Northing	Easting	Mercury		Molybdenum		Nickel		Potassium					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	0.00402	U	0.00402	0.202	B	0.188	1.84		0.141	176		6.01

Site Code	HEIS Sample	Sample Date	Northing	Easting	Selenium		Silicon		Silver		Sodium					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	0.323	DU	0.323	1490	N	1.41	0.094	U	0.094	108	C	6.58

Site Code	HEIS Sample	Sample Date	Northing	Easting	Tin		Uranium		Vanadium		Zinc					
					mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL	mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	2.82	DU	2.82	0.26	*D	0.0129	9.82		0.094	124	N	0.376

Site Code	HEIS Sample	Sample Date	Northing	Easting	Zirconium		
					mg/kg	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	2.97	D	0.098

300-288-1 TCLP Metals Data

Site Code	HEIS Sample	Sample Date	Northing	Easting	Arsenic		Barium		Cadmium		Chromium					
					mg/L	Q	POL	mg/L	Q	POL	mg/L	Q	POL	mg/L	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	0.05	NU	0.05	0.0923	N	0.01	0.01	NU	0.01	0.01	NU	0.01

Site Code	HEIS Sample	Sample Date	Northing	Easting	Lead		Mercury		Selenium		Silver					
					mg/L	Q	POL	mg/L	Q	POL	mg/L	Q	POL	mg/L	Q	POL
300-288-1	J1TWJ3	06/24/14	116216.5	593026.9	0.033	NU	0.033	0.00067	U	0.00067	0.0823	BN	0.06	0.0126	BN	0.01