# 2009 Annual Inspection for the Parkersburg, West Virginia, Nuclear Waste Policy Act Section 151(c) Disposal Site


## Summary

The Parkersburg, West Virginia, Site was inspected on October 22, 2009, to confirm the integrity of visible features and to determine the need, if any, for maintenance, additional inspections, or monitoring. Results of the inspection conclude that the site is in excellent condition. The grass covered disposal cell is in excellent condition. No evidence of erosion or slope instability on the disposal cell was noted during the inspection.

Vegetation control activities (mow and spray) have been effective in reducing the populations of weed species present at the site. Areas of poison hemlock were identified during the inspection. These areas need to be addressed in 2010.

Boundary monument BM–2 is damaged and needs to be repaired. It appears to have been hit by grounds maintenance equipment.

Monitor wells at Parkersburg are sampled once every five years. They were last sampled in 2008 and are scheduled to be sampled next in 2013. All of the monitor wells were observed to be properly secured during the site inspection this year.


## 1.0 Introduction

This report presents the findings of the annual U.S. Department of Energy (DOE) inspection of the Nuclear Waste Policy Act (NWPA) Section 151(c) disposal site at Parkersburg, West Virginia. M. Miller (Chief Inspector), K. Broberg (Assistant Inspector), with S.M. Stoller Corporation, the DOE Legacy Management (LM) Contractor, conducted the inspection on October 22, 2009. J. Craig, DOE–LM also participated in the inspection.

## 2.0 Institutional Controls

Institutional controls at the disposal site consist of federal ownership of the property. No use restrictions have been placed on off-site property.

## 3.0 Inspection Results

Features discussed in this report are shown on the attached inspection drawings (Sheet 1 shows physical features and Sheet 2 is a vegetation map). Photographs to support specific observations are identified on the appropriate sheet using a photograph location (PL) number.

## 3.1 Site Access

The Parkersburg site is immediately adjacent to land owned by the Northwest Pipe Company. Access to the site from Northwest Drive (formerly called Foster Drive, as in the LTSP) crosses a

field being used for soccer. The access route is along a permanent 20-foot-wide right-of-way. During the 2008 inspection it was noted that although the grade over the railroad tracks provides adequate clearance for a passenger car, some gravel is needed to fill in low spots. The condition observed in 2009 was unchanged from 2008. Placing gravel in the low spots is identified as a low maintenance priority task for this site. It is recommended that some gravel be placed in the low spots in the grade over the railroad tracks.

## 3.2 Entrance Gate and Security Fence

Both the entrance gate and security fence were replaced in 2007 and are in excellent condition. It was noted during the inspection that a bolt had been removed from the gate latch in the southwest corner of the site compromising the security of the gate. Inspectors installed a chain to re-secure the gate. A chain was also added to the other personnel gate located in the northwest corner of the site (PL–1). It is recommended that better latch mechanisms be installed at the two personnel gates.

Vegetation management efforts are working to keep woody vegetation off the perimeter fence. Spraying along the fence line is taking place and is effective (PL–2). A large patch of poison hemlock is present along the fence in the northwest corner of the site, near boundary monument BM–3 (PL–3 and PL–4). It is recommended that spray/mow efforts be increased in this area in 2010 to address the poison hemlock.

An area of several animal burrows is present under the west perimeter fence (PL–5). A couple of these burrows are quite large. Future inspectors need to be aware of trip hazards in this area.

## 3.3 Entrance Sign and Perimeter Signs

The site has one entrance sign and sixteen perimeter signs. All of the signs are in good shape.

## 3.4 Boundary Monuments

The site has six boundary monuments. All of the boundary monuments were located during the inspection. With the exception of boundary monument BM–2, all are in good shape.

Boundary monument BM–2 is damaged and needs to be repaired (PL–6). It appears to have been hit by grounds maintenance equipment. Although a t-post was installed nearby to make the monument more visible to grounds maintenance personnel, it appears that the t-post was installed too far from the monument. It is recommended that each monument be identified with a minimum of two t-posts to make them more visible to grounds maintenance personnel.

Boundary monument BM–4 is located in the bottom of a drainage ditch that parallels the western property boundary. It is buried under approximately a foot of silt but its location is well marked with a steel post making it fairly easy to find (PL–7 and PL–8). Given that BM–2 is damaged and needs to be repaired, it is recommended that BM–4 be raised at the same time to make it easier to locate in the future.

Boundary monuments BM–5 and BM–6 are both located in wooded areas (PL–9). Previous inspectors have flagged adjacent trees and put measurements from fence posts on the inspection

drawings to aid in locating these monuments. It is helpful to carry a 100-foot measuring tape to facilitate locating these boundary monuments.

## 3.5 Monitor Wells

There are six groundwater monitor wells at the Parkersburg site. All six wells are located inside the security fence around the edge of the cell. The wells are numbered in the chronological order in which they were drilled and installed. All six monitor wells were located during the inspection and observed to be secured with locks.

Of the six monitor wells, well construction and completion records for wells 1 through 4 are incomplete; therefore only wells 5 and 6 are routinely sampled every five years for water quality parameters. Water levels are collected every five years though at all 6 wells. Sampling and water level measurements were last collected in 2008 and are scheduled to be sampled again in 2013.

## 3.6 Disposal Cell and Area Inside Security Fence

The grass covered disposal cell is in excellent condition. No evidence of erosion or slope instability on the disposal cell was noted during the inspection.

A trench-like depression approximately 20 feet long, 6-12 inches deep, and 18- to 24-inches wide was noted about 50 feet to the south of the center point of the cell in 2006. It was attributed to an area that was disturbed in 2004 to remove poison hemlock root masses. The depression probably formed from consolidation of the disturbed soil. During the 2008 inspection the grass was just a little bit too high to discern the depression. During this years inspection the grass was short, but no subsidence could be discerned.

Dominant vegetation at the site consists of fescue, crown vetch, and goldenrod. The vegetation on the disposal cell cover, essentially in the area inside the security fence, appeared healthy and vigorous. Two areas of poisonous and noxious weeds were identified during the inspection. An area of poison hemlock in the northwest corner of the site near the personnel gate leading to BM–3, and an area of poison hemlock in the southwest corner of the site near the erosion control area (see sheet 2 of the inspection map). It is recommended that spray and mow efforts in 2010 continue and with more focus on these two areas.

## 3.7 Area Between Security Fence and Property Boundary

The drainage channel in the southwest corner of the site, lined with HDPE honeycomb baffles and brick energy dissipation baffles in August 1996, is in good condition and functioning as designed. Erosion does not appear to be occurring.

## 3.8 Outlying Area

The Parkersburg site is in a developed industrial area. Inspectors observed that no new development or change in the adjacent land use has occurred that threatens site integrity or access, or would result in more incidental traffic near the site.

## 3.9 Poisonous and Noxious Weed Control

Poisonous and noxious weed control at the Parkersburg site is taking place and site conditions are much improved. Species of poisonous or noxious weeds present at the Parkersburg site include Canada thistle, poison hemlock, Johnsongrass, and poison ivy.

Canada thistle was first identified at the site in 1999, primarily along the security fence. This weed is not a listed noxious species in West Virginia, but it is considered noxious in the neighboring states of Ohio and Pennsylvania. It seemed to be out competing desirable species on the site, as it had spread to a significant portion of the cell cover and perimeter. As a best management practice to maintain plant diversity on the property, DOE added control of this species to the scope of routine maintenance activities in 2001. No large areas of Canada thistle were noted during this year's inspection.

Poison hemlock was discovered on the site in 2003. In the past, plants had grown to heights of up to 10 feet and covered approximately 4 acres on and around the cell. Poison hemlock is a listed noxious weed species in West Virginia; and it poses a safety hazard to personnel who must walk through or work in infested areas, as all parts of the plant are poisonous. Poison hemlock poses a particular hazard to children, who often play in the soccer fields adjacent to the site. Although poison hemlock was cut and sprayed in 2009, re-growth was evident during the site inspection in two areas: (1) in the north corner of the site near the personnel gate leading to BM–3, and (2) in the southwest corner of the site near the erosion control area.

Johnsongrass is a listed noxious weed species in West Virginia and was first identified at the site in 2003. It reproduces by horizontal roots and by seed, and can be controlled with herbicide. No large areas of Johnsongrass were noted during this year's inspection.

No large areas of poison ivy were noted during this year's inspection.

# 4.0 Recommendations

1. The grade over the railroad tracks provides adequate clearance for a passenger car, but some gravel is needed to fill in some low spots (page 2).

   **Recommendation:** Gravel be placed in the low spots in the grade over the railroad tracks. This is considered to be a low maintenance priority.

2. It was noted during the inspection that a bolt had been removed from the gate latch in the personnel gate located on the southwest corner of the site, compromising the security of the gate. Inspectors installed a chain to re-secure the gate. A chain also was added to the other personnel gate located in the northwest corner of the site (page 2).

   **Recommendation:** It is recommended that better latch mechanisms be installed at the two personnel gates at the site.

3. A large patch of poison hemlock is present along the fence in the northeast corner of the site, near boundary monument BM–4 and in the southwest corner of the site (page 2).

   **Recommendation:** It is recommended that spray/mow efforts be increased in these areas in 2010 to address the poison hemlock.

4. Boundary monument BM–2 is damaged and needs to be repaired. It appears to have been hit by grounds maintenance equipment. Although a t-post was installed nearby to make the monument more visible to grounds maintenance personnel it appears that the t-post was installed too far from the monument (page 2).

   **Recommendation:** It is recommended that boundary monument BM–2 be repaired and that each boundary monument be identified with a minimum of two t-posts to make them more visible to grounds maintenance personnel.

5. Boundary monument BM–4 is located in the bottom of a drainage ditch that parallels the western property boundary. It is buried under approximately a foot of silt but its location is well marked with a steel post making it fairly easy to find (page 3).

   **Recommendation:** It is recommended that because BM–2 is damaged and needs to be repaired, that BM–4 be raised at the same time to make it easier to locate in the future.

## 5.0 Photographs

| Photo Location Number | Azimuth | Description |
|---|---|---|
| PL–1 | 315 | Chain placed on personnel gate in northwest corner of the site. |
| PL–2 | 300 | View down the outside of the northeast fence line. |
| PL–3 | 300 | Poison hemlock thriving in northwest corner of the site along the perimeter fence. |
| PL–4 | 190 | Poison hemlock thriving in northwest corner of the site along the perimeter fence. |
| PL–5 | 90 | Area of animal burrows outside of perimeter fence on west side of the site. |
| PL–6 | NA | Boundary monument BM–2 is damaged. |
| PL–7 | 315 | Location of boundary monument BM–4. |
| PL-8 | NA | Boundary monument BM–4. |
| PL-9 | NA | Boundary monument BM–5. |

PKB 10/2009. PL–1. Chain placed on personnel gate in northwest corner of the site.


PKB 10/2009. PL–2. View down the outside of the northeast fence line.

PKB 10/2009. PL–3. Poison hemlock thriving in northwest corner of the site along the perimeter fence.

PKB 10/2009. PL–4. Poison hemlock thriving in northwest corner of the site along the perimeter fence.

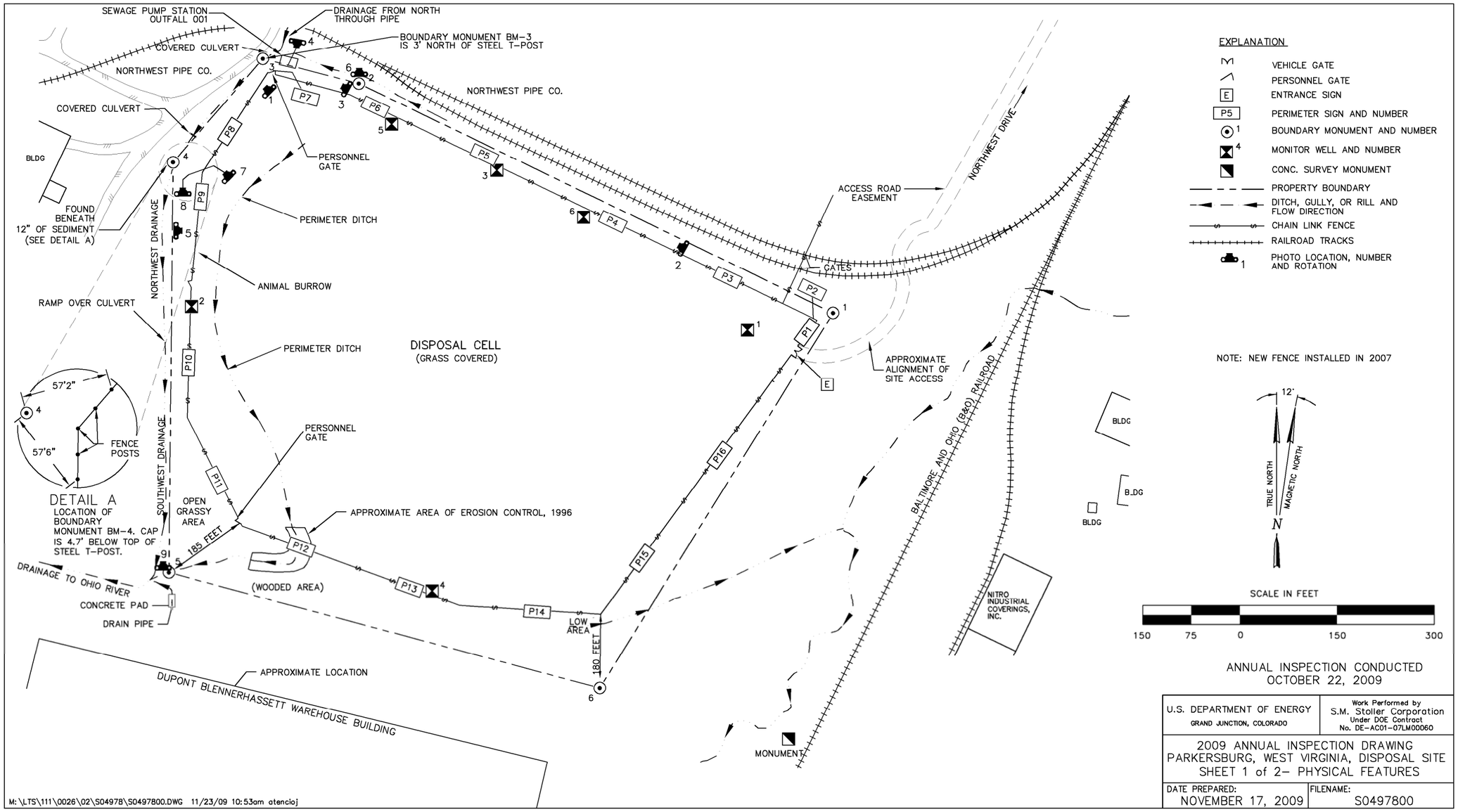
PKB 10/2009. PL–5. Area of animal burrows outside of perimeter fence on west side of the site.

PKB 10/2009. PL–6. Boundary monument BM–2 is damaged.

PKB 10/2009. PL–7. Location of boundary monument BM–4.

PKB 10/2009. PL–8. Boundary monument BM–4.

PKB 10/2009. PL–9. Boundary monument BM–5.


SEWAGE PUMP STATION OUTFALL 001
DRAINAGE FROM NORTH THROUGH PIPE
BOUNDARY MONUMENT BM-3 IS 3' NORTH OF STEEL T-POST
COVERED CULVERT
NORTHWEST PIPE CO.
NORTHWEST PIPE CO.
COVERED CULVERT
BLDG
FOUND BENEATH 12" OF SEDIMENT (SEE DETAIL A)
PERSONNEL GATE
PERIMETER DITCH
NORTHWEST DRAINAGE
ANIMAL BURROW
RAMP OVER CULVERT
PERIMETER DITCH
DISPOSAL CELL
(GRASS COVERED)
ACCESS ROAD EASEMENT
NORTHWEST DRIVE
GATES
APPROXIMATE ALIGNMENT OF SITE ACCESS
BALTIMORE AND OHIO (B&O) RAILROAD
BLDG
B_DG
BLDG
NITRO INDUSTRIAL COVERINGS, INC.
MONUMENT
57'2"
57'6"
FENCE POSTS
DETAIL A
LOCATION OF BOUNDARY MONUMENT BM-4. CAP IS 4.7' BELOW TOP OF STEEL T-POST.
SOUTHWEST DRAINAGE
OPEN GRASSY AREA
PERSONNEL GATE
APPROXIMATE AREA OF EROSION CONTROL, 1996
185 FEET
(WOODED AREA)
DRAINAGE TO OHIO RIVER
CONCRETE PAD
DRAIN PIPE
LOW AREA
180 FEET
APPROXIMATE LOCATION
DUPONT BLENNERHASSETT WAREHOUSE BUILDING
P1
P2
P3
P4
P5
P6
P7
P8
P9
P10
P11
P12
P13
P14
P15
P16
E
EXPLANATION
VEHICLE GATE
PERSONNEL GATE
ENTRANCE SIGN
PERIMETER SIGN AND NUMBER
BOUNDARY MONUMENT AND NUMBER
MONITOR WELL AND NUMBER
CONC. SURVEY MONUMENT
PROPERTY BOUNDARY
DITCH, GULLY, OR RILL AND FLOW DIRECTION
CHAIN LINK FENCE
RAILROAD TRACKS
PHOTO LOCATION, NUMBER AND ROTATION
NOTE: NEW FENCE INSTALLED IN 2007
12°
TRUE NORTH
MAGNETIC NORTH
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SCALE IN FEET
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ANNUAL INSPECTION CONDUCTED
OCTOBER 22, 2009
U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO
Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-07LM00060
2009 ANNUAL INSPECTION DRAWING
PARKERSBURG, WEST VIRGINIA, DISPOSAL SITE
SHEET 1 of 2- PHYSICAL FEATURES
DATE PREPARED:
NOVEMBER 17, 2009
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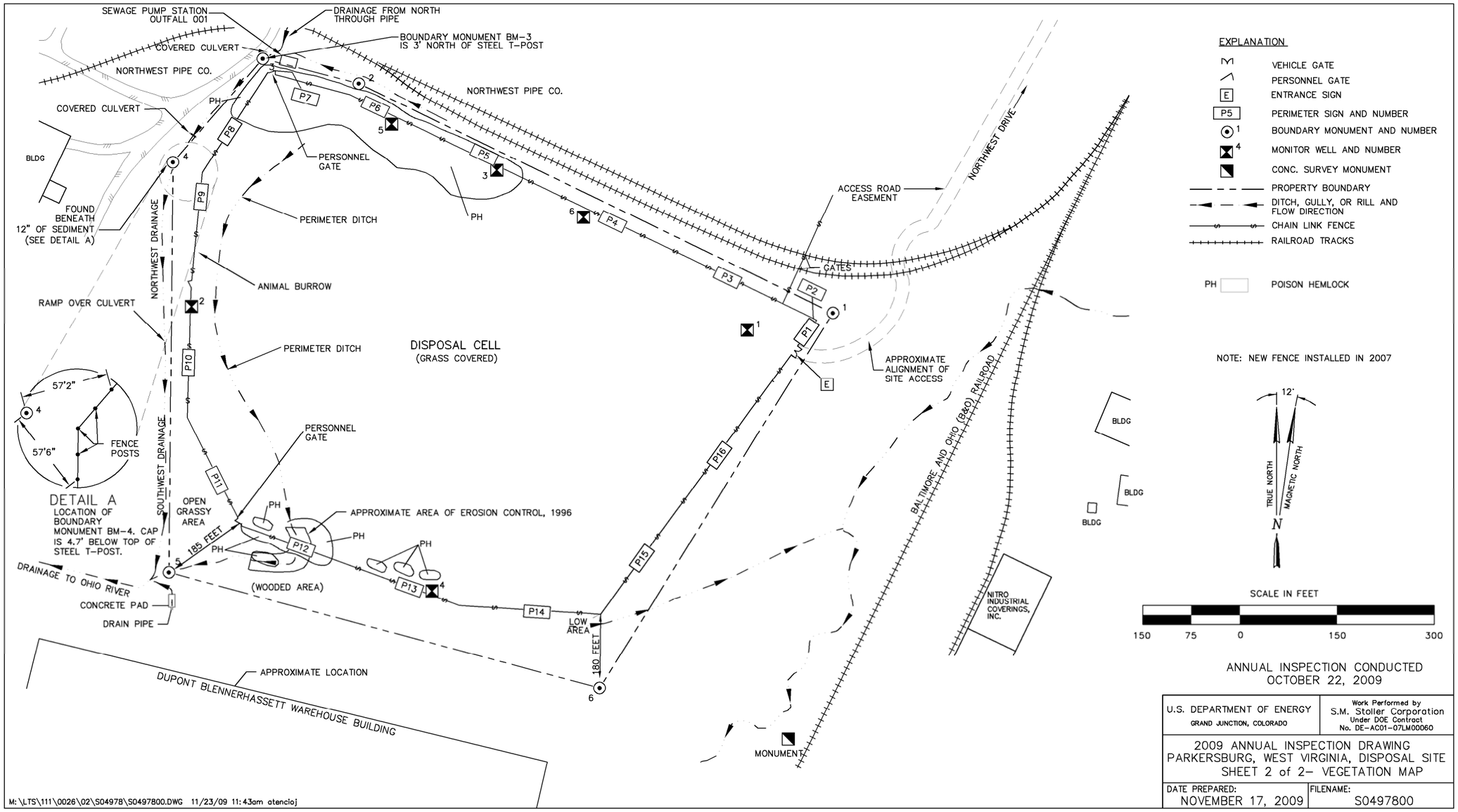
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PARKERSBURG, WEST VIRGINIA, DISPOSAL SITE
SHEET 2 of 2- VEGETATION MAP
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FILENAME: S0497800
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