2010 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 21, 2010 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 disposal cell is in excellent condition. No evidence of erosion or slope instability on the disposal cell was noted during the inspection.

More attention needs to be given to vegetation control at the site. The mow and spray program has failed to control poison hemlock in a few areas. More attention needs to be given to these trouble areas in the upcoming year to address the poison hemlock.

Gravel was placed in 2010 next to the railroad tracks along the access road to fill in low spots. The access road was found to be in good shape.

Boundary monument BM–2 remains damaged and needs to be repaired. Access to boundary monument BM–4 could be improved if the monument was raised. Both are identified as minor maintenance items that will be addressed in the upcoming year. Maintenance will be coordinated with the Canonsburg and Burrell sites for greater efficiency.

Monitoring 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 monitoring wells encountered during the inspection were found to be properly secured.

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 21, 2010. C. Carpenter, DOE–LM also participated in the inspection.

2.0 Institutional Controls

Institutional controls at the disposal site consist of federal ownership of the property. This is backed up with physical access controls (warning signs and a chain link security fence). No use restrictions have been placed on off-site property.

Inspectors saw no evidence for violation of any of the above stated restrictions during the site inspection.

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) crosses a field being used for soccer. The access route is along a permanent 20-foot-wide right-of-way.

Earlier this year, low spots along the site access road, near the grade where the railroad tracks cross over the road, were filled in with gravel (PL–1, and PL–2). With placement of the gravel, the access road is now in excellent shape.

3.2 Entrance Gate and Security Fence

Both the entrance gate and security fence were replaced in 2007 and remain in excellent condition.

Vegetation management efforts along the fence need to be improved. A vegetation free zone needs to be maintained along the base of the fence, to keep vegetation off of the fence (PL–3). It is recommended that more effort be made to keeping a vegetation free zone along the base of the fence in the upcoming year.

Several animal burrows are present under the west perimeter fence. A couple of the burrows are quite large. It is recommended that soil be used to fill in the larger burrows in this area to eliminate trip hazards for future inspectors.

3.3 Entrance Sign and Perimeter Signs

The site has one entrance sign and fifteen 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. During the spring of 2010 some additional t-posts were installed around boundary monuments to make them more visible to the grounds maintenance crew. With the exception of boundary monument BM–2, all of the boundary monuments are in good shape.

Repair of boundary monument BM–2 is a low priority maintenance item that will be addressed in the upcoming year. Repairs will be coordinated with similar work at Canonsburg and Burrell for greater efficiency.

Boundary monument BM–4 is located in the bottom of a drainage ditch that parallels the northwest property boundary. It is buried under approximately a foot of silt but its location is marked with a steel post. 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 see in the future. Vegetation around boundary monument BM–4 has become rather dense (PL–4). It is recommended that additional attention be made to controlling vegetation around boundary monuments during the upcoming year.

3.5 Monitoring Wells

There are six groundwater monitoring wells at the Parkersburg site. All six wells are located inside the security fence. The wells are numbered in the chronological order in which they were drilled and installed.

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 again in 2013. Vegetation growth around the monitoring wells was not being maintained as well as it should be (PL–5). It is recommended that more effort be made this upcoming year to keep unwanted vegetation away for the wells.

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. Dominant vegetation 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.

A few areas of poisonous and noxious weeds were identified during the inspection. Poison hemlock was thriving in the northwest corner of the site near the personnel gate leading to BM–3, (PL–6) and in the southwest corner of the site near the erosion control area (see sheet 2 of the inspection map) (PL–7). It is recommended that spray and mow efforts in the upcoming year continue and more attention placed 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 is taking place, but acceptable results have not yet been obtained. 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 2010, re-growth was evident during the site inspection in two areas particularly: 1) in the northwest 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.

Johnson grass 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 Johnson grass were noted during this year's inspection.

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

4.0 Recommendations

1) A vegetation free zone needs to be maintained along the base of the fence (page 2).

   Recommendation: It is recommended that more effort be made to keeping a vegetation free zone along the base of the fence in the upcoming year.

2) Several animal burrows are present under the west perimeter fence. A couple of the burrows are quite large (page 2).

   Recommendation: It is recommended that soil be used to fill in the larger burrows in this area to eliminate trip hazards for future inspectors.

3) Boundary monument BM–2 is damaged and needs to be repaired, and boundary monument BM–4 is buried and needs to be raised to make it easier to locate (page 2).

   Recommendation: It is recommended that boundary monument BM–2 be repaired and boundary monument BM–4 be raised this upcoming year. The repairs and modifications should be coordinated with similar work at the Canonsburg and Burrell site for greater efficiency.

4) Vegetation around boundary monument BM–4 was rather dense (page 2).

   Recommendation: It is recommended that additional attention be made to controlling vegetation around boundary monuments during the upcoming year.

5) Vegetation growth around the monitoring wells was not being maintained as well as it should be (page 3).

   Recommendation: It is recommended that more effort be made this upcoming year to keep unwanted vegetation away for the monitoring wells.

6) Poison hemlock was thriving in the northwest corner of the site near the personnel gate leading to BM–3, and in the southwest corner of the site near the erosion control area (see sheet 2 of the inspection map) (page 3).

   Recommendation: It is recommended that spray and mow efforts in the upcoming year continue and more attention placed on these two areas.

5.0 Photographs

Photo Location Number	Azimuth	Description
PL–1	350	Fresh gravel on site access road by railroad tracks.
PL–2	NA	Fresh gravel on site access road by railroad tracks.
PL–3	225	Outside of north perimeter fence.
PL–4	NA	Thick vegetation growth around boundary monument BM–4.
PL–5	190	Vegetation growth around monitoring well 6.
PL–6	90	Poison hemlock growth in north corner of site near personnel gate.
PL–7	100	Southwest corner of perimeter fence, near personnel gate.

PKB 10/2010. PL–1. Fresh gravel on site access road by railroad tracks.

PKB 10/2010. PL–2. Fresh gravel on site access road by railroad tracks.

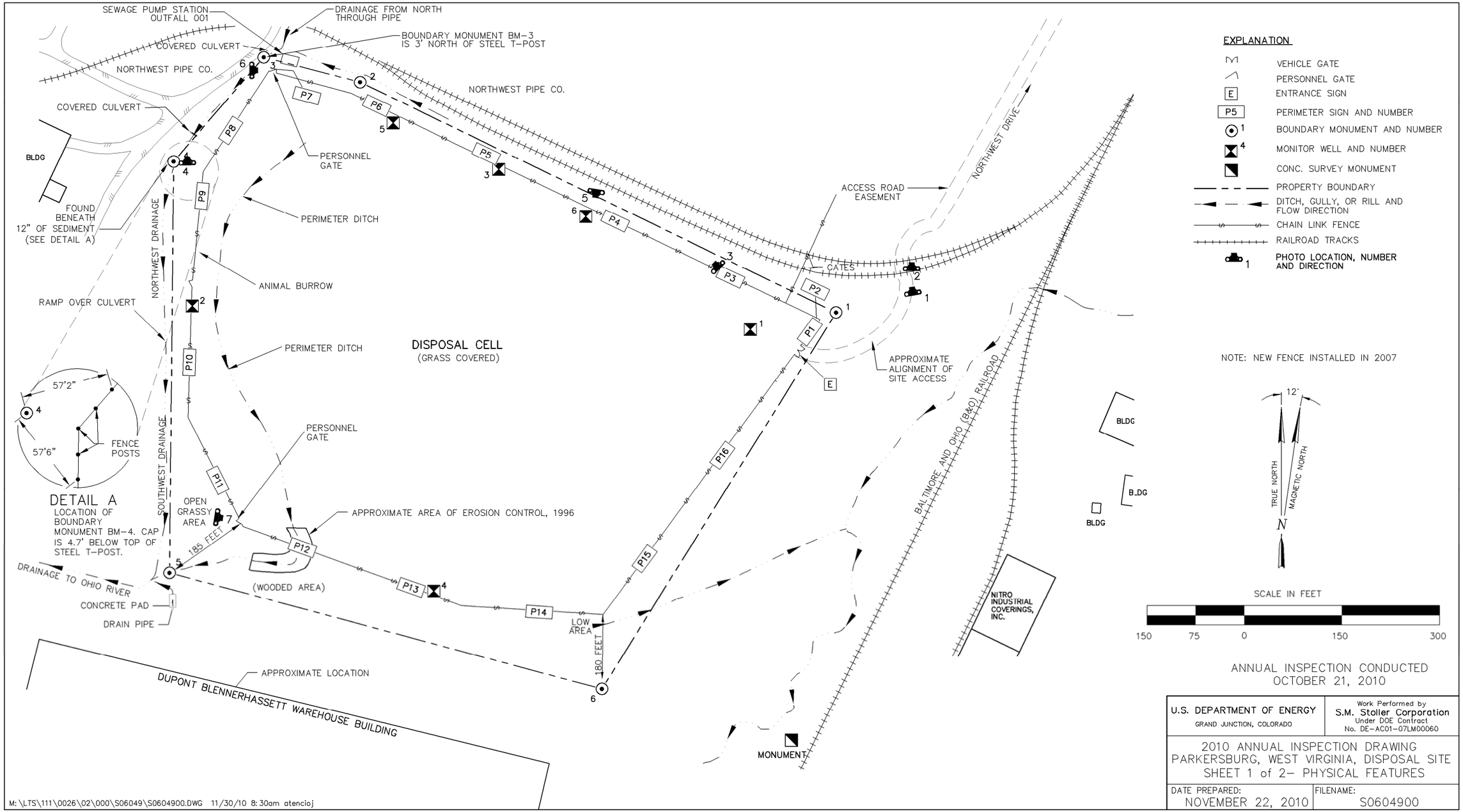
PKB 10/2010. PL–3. Outside of north perimeter fence.

PKB 10/2010. PL–4. Thick vegetation growth around boundary monument BM–4.

PKB 10/2010. PL–5. Vegetation growth around monitoring well 6.

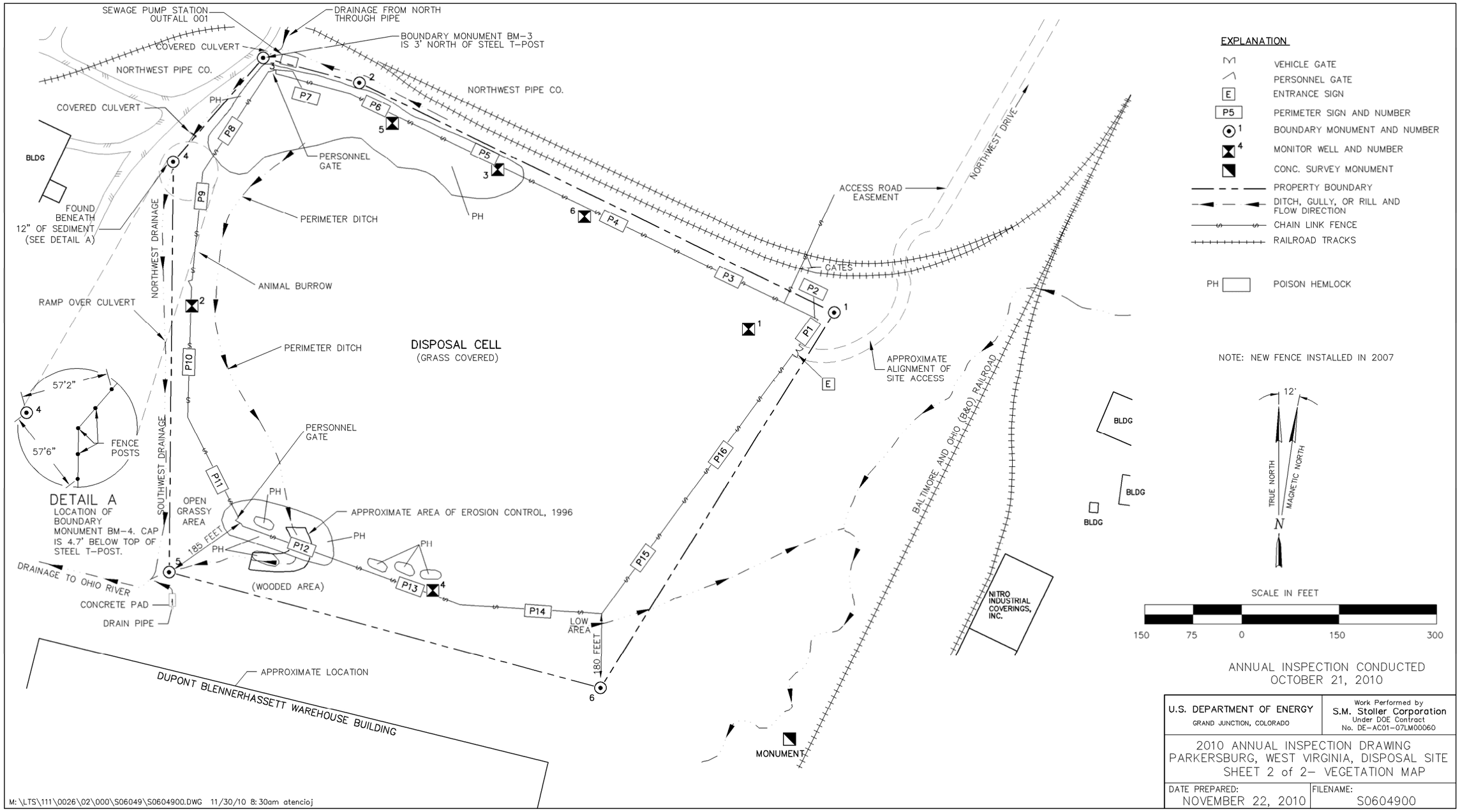
PKB 10/2010. PL–6. Poison hemlock growth in north corner of site near personnel gate.

PKB 10/2010. PL–7. Southwest corner of perimeter fence, near personnel gate.



ANNUAL INSPECTION CONDUCTED
OCTOBER 21, 2010

U.S. DEPARTMENT OF ENERGY GRAND JUNCTION, COLORADO	Work Performed by S.M. Stoller Corporation Under DOE Contract No. DE-AC01-07LM00060
2010 ANNUAL INSPECTION DRAWING PARKERSBURG, WEST VIRGINIA, DISPOSAL SITE SHEET 1 of 2- PHYSICAL FEATURES	
DATE PREPARED: NOVEMBER 22, 2010	FILENAME: S0604900


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.
COVERED CULVERT
BLDG
FOUND BENEATH 12" OF SEDIMENT (SEE DETAIL A)
NORTHWEST DRAINAGE
PERSONNEL GATE
PERIMETER DITCH
ANIMAL BURROW
RAMP OVER CULVERT
PERIMETER DITCH
DISPOSAL CELL
(GRASS COVERED)
ACCESS ROAD EASEMENT
NORTHWEST DRIVE
CATES
APPROXIMATE ALIGNMENT OF SITE ACCESS
BALTIMORE AND OHIO (B&O) RAILROAD
PERSONNEL GATE
SOUTHWEST DRAINAGE
OPEN GRASSY AREA
185 FEET
APPROXIMATE AREA OF EROSION CONTROL, 1996
(WOODED AREA)
DRAINAGE TO OHIO RIVER
CONCRETE PAD
DRAIN PIPE
LOW AREA
180 FEET
APPROXIMATE LOCATION
DUPONT BLENNERHASSETT WAREHOUSE BUILDING
MONUMENT
NITRO INDUSTRIAL COVERINGS, INC.
BLDG
BLDG
BLDG
57'2"
57'6"
FENCE POSTS
DETAIL A
LOCATION OF BOUNDARY MONUMENT BM-4. CAP IS 4.7' BELOW TOP OF STEEL T-POST.
PH
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
PH POISON HEMLOCK
NOTE: NEW FENCE INSTALLED IN 2007
12'
TRUE NORTH
MAGNETIC NORTH
N
SCALE IN FEET
150 75 0 150 300
ANNUAL INSPECTION CONDUCTED OCTOBER 21, 2010
U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO
Work Performed by S.M. Stoller Corporation Under DOE Contract No. DE-AC01-07LM00060
2010 ANNUAL INSPECTION DRAWING
PARKERSBURG, WEST VIRGINIA, DISPOSAL SITE
SHEET 2 of 2- VEGETATION MAP
DATE PREPARED: NOVEMBER 22, 2010
FILENAME: S0604900
M:\LTS\111\0026\02\000\S06049\S0604900.DWG 11/30/10 8:30am atencioj