
Commercial Properties (Category 3)

Vibration impacts to typical commercial properties are not expected during operations of the proposed high-speed maglev system. Commercial (or institutional) properties with primary daytime usage have a higher vibration limit of 75 VdB. In addition, there is a greater reduction of vibration of 10 VdB transmitted to the interior of the more massive commercial structures relative to adjacent ground surface. For these combined reasons, vibration impacts to commercial properties are likely only at distances of about 8 meters (25 feet) or closer from the maglev centerline and operating at the highest speed of 402 kph (250 mph). At this time, based upon the potential vibration impact area, no existing commercial buildings would be affected by vibration.

4.4.3 Summary

Vibration impacts are projected to be minimal based upon an evaluation of the structures (residential and commercial) in the immediate vicinity of the maglev guideway. A detailed vibration assessment is included within the PTSF.

4.4.4 Mitigation

Mitigation would be based upon potential impacts to residential and commercial structures that may remain within the distances of the impact range defined above. Mitigation could include property acquisition or financial compensation.

4.5 Potentially Contaminated Areas and Waste Disposal Sites

4.5.1 Methodology

A Phase I Environmental Site Assessment (ESA) was performed in August 2002 throughout the study area following guidelines in PENNDOT Publication 281, *Waste Site Evaluation Procedures Handbook, Volume I* (June 1999). The Phase I ESA is the first step in a process to establish “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial area customary practice” as defined in the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA). This assessment also served to identify waste materials that would be handled in accordance with the PADEP waste management regulations, and as required by the Occupational Safety and Health Administration (OSHA), to identify health and safety hazards that could be encountered during construction. Other sources of information utilized for the Phase I ESA included a regulatory database search, contacts with knowledgeable individuals and environmental regulators, and a review of historic aerial photographs and Sanborn Fire Insurance Maps.

A 60-meter (200-foot) corridor was used as the study area for each alternative alignment. Information about past and present land use, regulated substances, hazardous waste materials, and waste disposal areas within the project area was acquired from various sources to complete a comprehensive search of the area. During the field reconnaissance phase, numerous features suggesting potentially contaminated waste areas were identified. Sources of potential contamination in these areas included, but were not limited to: underground storage tanks (USTs), aboveground storage tanks (ASTs), fuel islands, storage handling and disposal of hazardous substances, drums, waste disposal areas, wells, streams, stained soils or pave-

ment, air emissions, odors or meter readings, electrical transformers, railroad tracks, collection ponds, discolored water/seeps/discharges, and stressed vegetation. Conditions were noted on field checklists, copies of which are included in the *Phase I Environmental Site Assessment* report located in the PTSF.

The methodology for evaluating the alternative alignments included the development of a recommendation for each potentially contaminated waste area and waste disposal site identified during the Phase I ESA. These recommendations were used to compare over 250 identified, potentially contaminated waste areas within the study corridors of the alternative alignments. The four recommendations included the following:

- *No Further Action* - The sites with this recommendation would not require any specific considerations.
- *Construction/Health and Safety Monitoring* - Only minor, easily handled waste impacts were identified at these potentially contaminated waste sites. At these sites, construction activities can be conducted utilizing health and safety precautions to protect workers, the public, and the environment from suspected contamination.
- *Phase II Investigation* - Sites recommended for Phase II Investigation would require limited sampling and additional research.
- *Phase III Investigations* - This recommendation would require that a potentially contaminated waste site be subjected to a detailed and intrusive study to answer specific waste-related questions raised during the Phase I or II investigative activities. Sites requiring a Phase III investigation are considered to be sites of major concern because of the time, expense, and potential public health risks associated with the site investigation and any subsequent site clean-up.

4.5.2. Impact Analysis

No-Build Alternative

The No-Build Alternative would not result in immediate impacts to any of the contaminated sites or solid waste disposal facilities identified within the project area. However, construction of any future highway facility or transportation improvement project identified as part of the No-Build Alternative could potentially impact these or other contaminated waste sites in the project area. Specific plans would have to be examined as those future projects were developed to determine the level of potential impacts.

Build Alternatives

Section A

Construction of the PIA station and the Steel Plaza station and associated roadway improvements would not impact any hazardous waste sites.

Table 4.5.2-1 provides a listing of the potentially hazardous waste sites that would be impacted by Alternative Alignments A5-North and A5-South. Alternative Alignment A5-North would impact 18 potentially hazardous waste sites and Alternative Alignment A5-South would impact 21 sites.

Table 4.5.2-I Potential Waste Site Impacts: Section A

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-144	Duquesne Litho Inc.	704 Second St., Pittsburgh	A5-North; A5-South	There are four drums of unknown content, possible asbestos insulation, and stained ground near the loading docks in the rear of the building.	No Further Action
SS-198	Exxon Service Station	East Carson St., Pittsburgh	A5-North; A5-South	There are USTs on the property.	Phase II
SS-199	<i>Pacific Pride Service Station</i>	<i>East Carson St., Pittsburgh</i>	<i>A5-North; A5-South</i>	<i>There are USTs on the property.</i>	<i>Phase III</i>
SS-201	Corliss Auto Service Center	2411 West Carson St., Pittsburgh	A5-North; A5-South	There are waste oil drums with ground staining around them stored on the property.	Construction/Health & Safety Monitoring
SS-202	Station Square	West Carson St., Pittsburgh	A5-North; A5-South	As this area was a large industrial site in the early 1900s, there is potential to encounter waste oils and chemicals.	Construction/Health & Safety Monitoring
SS-211	Trailer Shack	McKees Rocks Rd., west of I-79, Kennedy Twp.	A5-North; A5-South	There are drums of unknown content and piles of scrap metals lying around the property.	Construction/Health & Safety Monitoring
SS-212	<i>McKees Rocks Auto Wreckers</i>	<i>13 Creek Rd., Kennedy Twp.</i>	<i>A5-North; A5-South</i>	<i>There are junked cars, oil drums, and an oil AST on the property.</i>	<i>Phase III</i>
SS-214	<i>Tri State Petroleum</i>	<i>Creek Rd., Kennedy Twp.</i>	<i>A5-North; A5-South</i>	<i>There are several petroleum ASTs and drums on this property. There is a large amount of ground staining and stressed vegetation on the property.</i>	<i>Phase III</i>
SS-215	<i>Cieslak Auto Salvage</i>	<i>Creek Rd., Kennedy Twp.</i>	<i>A5-North; A5-South</i>	<i>There are junked cars, oil drums, and a heating oil AST on the property. There is ground staining under the piles of automobiles.</i>	<i>Phase III</i>
SS-216	Transformers	Clymer Way & Charles Ave., McKees Rocks	A5-North; A5-South	There is a fallen power pole with three transformers on it. There is oil staining on the ground near the transformers.	Phase II
SS-218	<i>Windgap Ave. Property</i>	<i>Windgap Ave., Pittsburgh</i>	<i>A5-North; A5-South</i>	<i>There are scrap metal piles and rusted out drums stored on the property.</i>	<i>Phase III</i>
SS-221	Ace Wire, Spring & Form Co.	1105 Thompson Ave., McKees Rocks	A5-South	There are metal scraps stored in cardboard drums.	Construction/Health & Safety Monitoring
SS-222	General Wire Spring Co.	Thompson Ave., McKees Rocks	A5-North; A5-South	There are drums of unknown content and scrap metal stored along the south side of the building.	Phase II
SS-223	Concrete Concepts	1095 Thompson Ave., McKees Rocks	A5-South	There are several oil ASTs and oil drums on the property. There is ground staining near the ASTs.	Phase II

Table 4.5.2-1 Potential Waste Sites Impacts: Section A (Continued...)

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-224	Beitler Trucking	3379 Stafford St., Pittsburgh	A5-North; A5-South	There are USTs for fueling located on the property.	Phase II
SS-225	<i>Miller-Thomas-Geikus (MTG)</i>	<i>Stafford St., Pittsburgh</i>	<i>A5-North; A5-South</i>	<i>There are oil containing drums, ASTs, and USTs located on the property. There is also ground staining associated with the drums and ASTs.</i>	<i>Phase III</i>
SS-226	Pruett Shaffer	3327 Stafford St., Pittsburgh	A5-North; A5-South	There is a 10,000 gal. mineral spirits AST and more than 100 oil drums stored on the property.	Phase II
SS-227	Stafford Street Property	Behind Beitler Trucking, Stafford St., Pittsburgh	A5-North; A5-South	There are three ASTs and old machinery equipment stored on the property.	Construction/Health & Safety Monitoring
SS-229	<i>Oil Derricks</i>	<i>South of Elliot Dr. & North of Lakeview Dr., Robinson Twp.</i>	<i>A5-North; A5-South</i>	<i>There are six ASTs with large amounts of oil "pooled" around the ASTs.</i>	<i>Phase III</i>
SS-250	<i>Monongahela River Crossing</i>	<i>Near the Liberty Bridge, Pittsburgh</i>	<i>A5-North; A5-South</i>	<i>There are possible hazardous substances (PCBs and petroleum compounds) in the sediment on the river bottom.</i>	<i>Phase III</i>
SS-283	<i>Tanks</i>	<i>North of Rt. 60, Moon Twp.</i>	<i>A5-South</i>	<i>There are two oil ASTs, empty drums, and a junk pile near a house. There is heavy ground staining near the ASTs.</i>	<i>Phase III</i>

Blue Italics indicate sites of major concern.

Sites of major concern that would be impacted by Alternative Alignment A5-North include: SS-199, SS-212, SS-214, SS-215, SS-218, SS-225, SS-229, and SS-250. Sites of major concern that would be impacted by Alternative Alignment A5-South include: S-199, SS-212, SS-214, SS-215, SS-218, SS-225, SS-229, SS-250, and SS-283. Sites of major concern would require a Phase III investigation prior to construction of the proposed project. All of these sites are noted on Table 4.5.2-1 in italics.

Section B

In Section B, the alternative alignments would terminate at the Thompson Run station, currently referred to as the Gascola site, a former slag and steel-processing disposal facility. The United States Steel Corporation (USS) currently owns the Gascola site. The Gascola site consists of approximately 101 hectares (250 acres) and is located in the Municipality of Penn Hills. Slag refuse and other steel production waste generated at USS Irvin Works were dumped by rail into old strip-mining cuts and the Thompson Run stream valley. USS used this site from the early 1930s through the 1970s. According to company records, the distance to Gascola from the Irvin Works resulted in the shipment of mostly slag to the site, with waste materials of

a more hazardous nature remaining closer to the steel-making facility. The slag originated from the blast furnaces and open hearths. Other materials associated with steel production that have the potential to be impacted by the station include: cinder, flue dust, wastewater treatment sludge, used furnace bricks, concrete rubble, neutralized waste pickle liquor, drums with unknown contents, and wood debris. The depths of this slag waste are estimated to range from a few inches, along the eastern and western boundaries of the property, to a maximum depth approaching 24.3 meters (80 feet) near the center of the site. Historical records indicate that this site included areas of storage tank usage, with fueling areas located adjacent to the main service road, which stored diesel fuel and was used as late as the early 1990s before abandonment.

Currently the slag on the site is being excavated and reclaimed for reuse. A series of environmental studies reviewed for this project indicated that this site has resulted in minimal impact to the surrounding area. Impacts to soil and groundwater have been from lead contamination, with surface soil sampling indicating a total lead concentration as high as 2,000 mg/kg or parts per million. Analysis of similar soil samples to determine if the lead concentrations leaching from the soil into the groundwater are hazardous indicated that the soil meets USEPA waste standards for non-hazardous materials.

Table 4.5.2-2 shows that Alternative Alignment B4-East would impact 27 properties and Alternative Alignment B4-West would impact 31 properties identified as potentially hazardous waste sites. Sites of major concern that would be impacted by Alternative Alignment B4-East include: SS-053, SS-057, SS-071, SS-134, SS-139, SS-160, SS-167, SS-186, and SS-189. Sites of major concern that would be impacted by Alternative Alignment B4-West include: SS-053, SS-055, SS-057, SS-071, SS-134, SS-139, SS-160, SS-167, SS-186, and SS-189. Sites of major concern would require a Phase III investigation prior to construction of the proposed project. All of these sites are noted on Table 4.5.2-2 in italics.

Table 4.5.2-2 Potential Waste Site Impacts: Section B

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-018	Haskell Senator International	Hulton Rd. & Haskell Lane, Plum	B4-East; B4-West	There are unknown ASTs on the west side of the building, and there are brackets for ASTs on the east side of the building.	Phase II
SS-022	Unknown Tank Site	Off Milltown-Unity Rd. near the R.R. tracks, Penn Hills	B4-West	There are above ground fueling tanks, gas/oil wells, and various unknown drums at this site.	Phase II
SS-029	Unknown Garage	Railroad St., Penn Hills	B4-West	There are waste oil drums stored on the property.	No Further Action
SS-049	Giorgis Auto Repair/J.B. Motors	4110 Old William Penn Hwy., Monroeville	Roadway Improvements	There are waste oil containers and ground staining on the property.	Construction/Health & Safety Monitoring
SS-051	Hank's Auto Service	1475 Ferry Rd., Monroeville	Roadway Improvements	There are waste oil containers and ground staining on the property.	Phase II
SS-052	Pittsburgh Sign Corp.	497 Thompson Run Rd., Penn Hills	Roadway Improvements	There is an AST and many large scrap metal piles on the property.	Phase II

Table 4.5.2-2 Potential Waste Site Impacts: Section B (Continued...)

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-053	Gascola	Thompson Run Rd., Penn Hills	B4-East; B4-West; Roadway Improvements	This property is currently a slag dump.	Phase III
SS-054	Gupta Permold Corp.	234 Lott Rd., Penn Hills	B4-West	There are drums stored behind the building.	No Further Action
SS-055	Penn Hills School Dist. Trans. Dept.	Saltsburg Rd., Penn Hills	B4-West	There are a fueling island and a bus maintenance garage on the property.	Phase III
SS-056	Sewage Treatment Plant	Colorado St. in Penn Hills Park, Penn Hills	B4-East; B4-West	There are ASTs that store sanitary wastes on the property.	No Further Action
SS-057	Contaminated Soil	Adjacent to Penn Hills Park, Penn Hills	B4-East; B4-West	A coal tar type waste was discovered here during a sewage line installation.	Phase III
SS-061	CXL	10 Plum St., Verona	B4-East; B4-West	There is an above ground fueling tank north of the building.	Construction/Health & Safety Monitoring
SS-071	Scrap Metal Piles	Allegheny River Blvd. & Center St. behind Nickels Bakery, Verona	B4-East; B4-West	There are drums and scrap metal stored in large piles around the outside of the building.	Phase III
SS-134	D & D Auto Salvage	Butler St. near 62nd St. Bridge, Pittsburgh	B4-East; B4-West	There are drums and junked cars stored on the property.	Phase III
SS-139	City of Pittsburgh Asphalt Plant	Butler St., Pittsburgh	B4-East; B4-West	There are two ASTs on the property.	Phase III
SS-156	Pittsburgh Flatroll Co.	31st St. and Railroad Ave., Pittsburgh	B4-East; B4-West	ASTs have been removed from this facility.	Phase II
SS-158	Ralph J. Meyers Co.	3101 Smallman St., Pittsburgh	B4-East; B4-West	There are ASTs for asphalt and drums on the property.	Phase II
SS-160	Pitt Ohio Express	34th St. & Railroad Ave., Pittsburgh	B4-East; B4-West	This was a former Exxon Oil & Refining Co. There are many ASTs and drums on the property. There is oil staining on the buildings and on the ground near the buildings.	Phase III
SS-161	Stella Auto Parts	33rd St., Pittsburgh	B4-East; B4-West	There are waste oil drums stored on the property.	No Further Action
SS-163	Valley National Gases Inc.	33rd St. & Spruce Way, Pittsburgh	B4-East; B4-West	There is a 1,000 gal. liquid oxygen AST on the property.	No Further Action
SS-167	Giant Eagle/Limbach	35th St., Pittsburgh	B4-East; B4-West	There are a UST and a transformer on the property.	Phase III
SS-168	J & M Hydraulic Systems Inc.	38th St., Pittsburgh	B4-East; B4-West	There is stained ground associated with waste oil drums, and there is a transformer with possible PCB/oil staining along the south side of the building.	Phase II

Table 4.5.2-2 Potential Waste Site Impacts: Section B (Continued...)

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-169	Allied Welding & Fabricating Co.	38th St. & Foster Ave., Pittsburgh	B4-East; B4-West	There are an AST and transformers with possible PCB/oil staining on the property. The building appears to be vacant.	Phase II
SS-171	CMU Robotics Engineering Consortium	10 40th St., Pittsburgh	B4-East; B4-West	There are ASTs and waste oil drums stored on the property.	Construction/Health & Safety Monitoring
SS-172	Vacant Facility	40th St. & Willow St., Pittsburgh	B4-East; B4-West	The building is vacant and there are two large silos and 12-14 drums on the property.	Phase II
SS-175	McConway & Torrey Corp.	109 48th St., Pittsburgh	B4-East; B4-West	There are ASTs and drums stored on the property.	Phase II
SS-176	Ameri-Textile	100 51st St., Pittsburgh	B4-East; B4-West	There are two waste oil ASTs and several blue/white product drums. There are also transformers with possible PCB/oil staining on this property.	Phase II
SS-181	Schrieber/ Consolidated Freight Ways	73 McCandless Ave., Pittsburgh	B4-East; B4-West	There are two ASTs and light ground staining throughout the property.	No Further Action
SS-185	Sunoco's Pittsburgh Terminal	57th St., Pittsburgh	B4-East; B4-West	There are several oil and petroleum ASTs on the property. There are also several groundwater monitoring wells on the property.	Phase II
SS-186	<i>Rubinoff Development Site</i>	<i>Between 51st St. & 52nd St., Pittsburgh</i>	<i>B4-East; B4-West</i>	<i>There was a mill at this site. A lead pit was found in the adjacent West Penn parking lot. There are nine monitoring wells on the property.</i>	<i>Phase III</i>
SS-189	<i>Lamanga Cheese Co.</i>	<i>Plum St., Verona</i>	<i>B4-East; B4-West</i>	<i>There are USTs and waste drums stored on the property.</i>	<i>Phase III</i>
SS-247	<i>PENNDOT Maintenance Facility</i>	<i>PA Route 48, Monroeville</i>	<i>Roadway Improvements</i>	<i>There are diesel and petroleum USTs for fueling, a sodium chloride AST, and heavy ground staining on the property.</i>	<i>Phase III</i>
SS-271	Field Engineering	Liberty Ave., Pittsburgh	B4-East; B4-West	There was a fueling island with USTs on the property. The USTs have been removed.	Phase II
SS-279	NKOC Construction Co.	Liberty Ave., Pittsburgh	B4-East; B4-West	There is construction equipment stored on the property.	Construction/Health & Safety Monitoring
SS-285	Pit Stop-76 Gas Station	3899 Old William Penn Hwy., Monroeville	B4-East; B4-West	There are three petroleum USTs on the property.	Phase II

Blue Italics indicate sites of major concern.

Roadway improvements and upgrades for the Thompson Run station would impact five sites of environmental concern: SS-049, SS-051, SS052, SS-053, and SS-247.

Section C

Construction of the Greengate Mall station would impact one potentially hazardous waste site, the Goodyear Auto Service Center, which was closed in the early 1990s. Construction of the proposed Toll Route 66/PA Route 136 station would not impact any hazardous waste sites.

Table 4.5.2-3 shows that Alternative Alignment C2-Mod would impact seven sites; Alternative Alignment C5 would impact five sites; and Alternative Alignment C6 would impact nine sites, including the Irwin Launch Facility, a former military facility. Alternative Alignment C2-Mod would impact the Valley Landfill on Pleasant Valley Road. The portion of the alignment that would impact the site would be in a location where wastes were never placed and has no development potential for future disposal use. Otherwise, the majority of the potentially hazardous waste sites encountered in these alignments are small auto service businesses, with the potential for petroleum hydrocarbons and waste oils to enter the environment from spills and leaks from USTs, ASTs, and drums.

Roadway improvements and upgrades for the Greengate Mall and Toll Route 66/PA Route 136 stations would not impact any sites of concern.

Sites of major concern that would be impacted by Alternative Alignment C2-Mod include: SS-001, SS-125, and SS-247. There are two sites of major concern that would be impacted by Alternative Alignment C5: SS-001 and SS-247. Sites of major concern that would be impacted by Alternative Alignment C6 consist of: SS-053, SS-247, SS-258, and SS-284. Sites of major concern would require a Phase III investigation prior to construction of the proposed project. All of these sites are noted on Table 4.5.2-3 in italics.

4.5.3 Summary

Hazardous waste sites could be impacted by future projects in the No-Build Alternative. It is likely, however, that major hazardous waste sites would be avoided.

Under the build alternatives, the PIA and Steel Plaza stations and associated roadway improvements would not impact any potentially hazardous waste sites, and the construction of these facilities would not require any additional investigation or mitigation.

Alternative Alignment A5-South would impact three more potentially hazardous waste sites than Alternative Alignment A5-North. The sites identified are typical of those encountered during the development of a transportation project and could be successfully mitigated. Neither alternative appears to present a threat to the environment.

Alternative Alignment B4-West would impact four more potentially hazardous waste sites than Alternative Alignment B4-East, including the Penn Hills School District Transportation Department. The Penn Hills site is the only location that would require a considerable amount of additional investigation and mitigation due to the potential for soil and groundwater contamination from USTs. The other three sites, however, are typical of those encountered during the development of a transportation project and could be successfully mitigated.

The Thompson Run station is common to both Alternative Alignments B4-East and B4-West; therefore, either alignment would have the same impact to the Gascola site. The Th-

Table 4.5.2-3 Potential Waste Site Impacts: Section C

Site ID #	Site Name	Site Address	Alternative Alignment	Environmental Concern	Recommendation
SS-001	<i>Goodyear Auto Service Center</i>	<i>US 30 across from Greengate Mall, Greensburg</i>	<i>C2-Mod; C5</i>	<i>Leaking USTs were removed in the early 90s (waste oil, BTEX).</i>	<i>Phase III</i>
SS-050	Burkardt Power Equipment	4135 Old William Penn Hwy., Monroeville	C2-Mod; C5; C6	There are three ASTs on the property	No Further Action
SS-053	<i>Gascola</i>	<i>Thompson Run Rd., Pen Hills</i>	<i>C6</i>	<i>This property is currently a slag dump</i>	<i>Phase III</i>
SS-052	Pittsburgh Sign Corp.	497 Thompson Run Rd., Penn Hills	C2-Mod; C5; C6	There is an AST and many large scrap metal piles on the property.	Phase II
SS-125	<i>Salem Auto Body & Gas Station</i>	<i>Main St., Jeanette</i>	<i>C2-Mod</i>	<i>There are USTs, ASTs, waste oil drums, and junked parts on this property. Heavy soil staining is also present at this site.</i>	<i>Phase III</i>
SS-127	Valley Landfill	Pleasant Valley Rd., Irwin	C2-Mod	There are many different types of wastes stored at this facility.	Construction/Health & Safety Monitoring
SS-131	Shannon Auto Salvage	Pleasant Valley Rd., Irwin	C5	There is soil staining associated with the many junked autos on the property.	Phase II
SS-132	Old Truck Repair Center	Murrysville Rd., Murrysville	C2-Mod	This is an abandoned truck repair station that had waste oil stored on the property at one time. There is light ground staining near the garage.	Phase II
SS-247	<i>PENNDOT Maintenance Facility</i>	<i>PA Route 48, Monroeville</i>	<i>C2-Mod; C5; C6</i>	<i>There are petroleum and diesel USTs for fueling, a sodium chloride AST, and heavy ground staining on the property.</i>	<i>Phase III</i>
SS-256	BP Service Station	Arona Rd. and US 30, North Huntingdon	C6	There are USTs for fueling located on the property.	Phase II
SS-257	Texaco Service Station	US 30, North Huntingdon	C6	There are USTs for fueling located on the property.	Phase II
SS-258	<i>Gongaware Bus Lines</i>	<i>8080 Pennsylvania Ave., North Huntingdon</i>	<i>C6</i>	<i>There are USTs for fueling located on the property.</i>	<i>Phase III</i>
SS262	Harliss Specialties Corp.	Biddle Ave., Irwin	C6	There is an oil AST and waste oil drums on the property.	Phase II
SS-284	<i>Irwin Launch Facility</i>	<i>Nike Rd., Irwin</i>	<i>C6</i>	<i>There are undefined uses of hazardous materials on this property.</i>	<i>Phase III</i>

Blue Italics indicate sites of major concern.

Thompson Run station would require additional testing and mitigation to obtain PADEP clearance. The roadway improvements and upgrades would impact five potentially hazardous waste sites, two of which would require Phase III investigations.

The Greengate Mall station would impact one site, the Goodyear Service Center, which was closed in the early 1990s. PADEP Leaking Underground Storage Tank (LUST) closure regulations were in effect then. The associated roadway improvements for this station would not impact any sites of concern.

The Toll Route 66/PA Route 136 station and associated roadway improvements would not impact any potentially hazardous waste sites.

Alternative Alignment C2-Mod and C6 would impact two and four more potentially hazardous waste sites, respectively, than Alternative Alignment C5.

Except for the Irwin Launch Facility on Nike Road (a former military facility), the sites identified in Section C are typical of those encountered during the development of a transportation project and can be successfully mitigated. The Irwin Launch Facility will require a Phase III investigation.

4.5.4 Mitigation

In 1995, Pennsylvania developed regulations to encourage redevelopment of former industrial properties (i.e., brownfields). *Act 2 of the Land Recycling Program* established risk-based statewide health standards for soil and groundwater, as listed in *25 PA Code Chapter 250*. The Land Recycling Program also established a process for site redevelopment and securing a release of state environmental liability for the property upon completion of the process.

As previously described in the Section B impacts discussion, the Thompson Run station would impact the Gascola site. Although a minimum amount of information has been obtained regarding the environmental condition of the property, this site is considered an excellent candidate for redevelopment under the *Act 2* legislation. A meeting with representatives from USS, the property owners, was held on April 4, 2002 to discuss the status of the site and its future potential use as a station. At that meeting, USS agreed to conduct additional investigations that would be utilized in moving the property through the *Act 2* process in order to obtain a release of environmental liability should the site be selected for the station. After the release is obtained, mitigative measures for the Thompson Run station would include removal of slag material (as currently being conducted) and the use of a Health and Safety Plan to protect workers in areas of potential lead contamination.

Mitigation measures for transportation projects typically include development of a Waste Management Plan and/or waste-management related provisions for incorporation into construction bid documents. This project would also utilize these types of documents to address potential contamination at identified waste sites.

Additional analysis and physical testing of these sites will need to be conducted during final design. Detailed testing, excavation, and disposal plans will be developed for sites that are identified as being impacted by construction.

PADEP is in the process of developing a regulatory standard to define “safe fill” under the residual (nonhazardous) waste management regulations in *25 PA Code Chapter 287*. Mitigative measures conducted during the project will be designed to meet these new regulations. If piers are placed in the Monongahela River, the locations selected will need to be tested to determine if the embankment/river bed dredging wastes are characterized as residual or hazardous waste, as defined by PADEP codes (*25 PA Code ss.287.1 and 260.1*). Appropriate sampling methods and analysis will be determined to satisfy all requirements of the PADEP and the USCOE for excavation and disposal.

4.6 Natural Ecological Systems

Natural ecological systems were identified within the project area. These systems were divided into terrestrial and wildlife resources, wetlands, and mining and mineral resources. Natural ecological systems were identified through baseline ecological data, then located and verified through field investigations. The complete methodologies utilized, account of impacts, and necessary mitigation measures are described within the individual resource discussions.

4.6.1 Terrestrial and Wildlife Resources

4.6.1.1 Methodology

Assessment of terrestrial and wildlife resources located within the defined limits of the proposed alternative alignments was conducted through a combination of quantitative and qualitative evaluation techniques. These techniques allowed for the documentation of impacts to ecologically important areas, as well as to terrestrial habitats. Studying impacts to the vast array of terrestrial flora/fauna found within the project area on a species basis was not practical; thus, assessing the habitat in which they live was undertaken. This was a more practical approach that consisted of gathering land use/land cover data to identify areas of potential terrestrial habitat and how it would be affected. In addition, a review of known sources of data, supplemented with limited field work, was conducted. Additional areas of potential terrestrial flora/fauna habitat were identified by the regulatory agencies while conducting inquiries into threatened and endangered species under their jurisdiction within the project area. Impacts to threatened and endangered species were investigated using a species-specific approach and are further discussed in Section 4.8, Threatened/Endangered Species.

Anderson Land Use/Land Cover System

The study first involved the collection of baseline data. Baseline data were collected through the combined use of existing information and field investigation. The *Anderson Land Use/Land Cover Classification System* (Level II) was used to categorize the various land cover types. (See Section 4.14 of this DEIS for maps and additional information on land use and land cover.) The *Anderson Land Use/Land Cover Classification System* was developed to create a standardized classification system consistent with all agency and data applications. Level I is the most generalized category and Level II, while still general, provides an increased level of detail. The land cover maps were prepared using aerial photography and field verified as necessary.