



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III

STATEMENT OF BASIS

NATIONAL STANDARD, LLC  
MOUNT JOY WIRE IMPOUNDMENT

1000 EAST MAIN STREET  
MOUNT JOY, PENNSYLVANIA

EPA ID NO. PAR 000 514 182

Prepared by  
Office of Remediation  
Land and Chemicals Division  
August 2016

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## List of Abbreviations and Acronyms

ACLs	Alternate Concentration Limits
AR	Administrative Record
EI	Environmental Indicator
EPA	Environmental Protection Agency
HA	EPA’s National Drinking Water Standard Health Advisory
IC	Institutional Control
MCL	EPA’s National Primary Drinking Water Standard Maximum Contaminant Level
mg/l	Micrograms per liter
PADEP	Pennsylvania Department of Environmental Protection
RCRA	Resource Conservation and Recovery Act
SB	Statement of Basis
SMCL	EPA’s National Drinking Water Standard Secondary Maximum Contaminant Level

## Section 1: Introduction

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The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis to solicit public comment on its proposed final remedy for the National Standard LLC Mount Joy Wire Impoundment facility located at 1000 East Main Street, Mount Joy, PA (National Standard Impoundment or Facility). EPA has prepared this Statement of Basis to explain the rationale for and to solicit public comment on its proposed remedy.

The Facility is subject to EPA's corrective action program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. §§6901 et seq., commonly referred to simply as RCRA. The corrective action program requires owners of certain current and past hazardous waste management operations to reduce or eliminate exposure to hazardous chemicals released to the environment. The Commonwealth of Pennsylvania's Department of Environmental Protection (PADEP) also has a long history of addressing environmental contamination at the Facility. However, PADEP is not authorized to implement the RCRA corrective action program. In Pennsylvania, that authority rests solely with EPA.

Information on the corrective action program as well as a fact sheet (listed under National Standard Impoundment – Mount Joy Wire Company) for the Facility can be found on the internet at <https://www3.epa.gov/reg3wcmd/ca/pa.htm>.

EPA has compiled an administrative record (AR) containing all documents, including data and quality assurance information, on which EPA's proposed remedy is based. See Section 8, Public Participation, for information on how you may review the AR.

## Section 2: Background

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The National Standard Impoundment is located along State Road 230 in Mount Joy Borough, Lancaster County, Pennsylvania. It is located within the property of the Mount Joy Wire Corporation, adjacent to an agricultural area in Rapho Township. Figure 1.

The National Standard Company Mount Joy Wire manufacturing facility (now the Mount Joy Wire Corporation) was constructed on a 26-acre property in 1965. It has operated in the manufacture of steel and specialty-plated wire since that time. National Standard Company, now restructured as National Standard LLC, operated a hazardous waste surface impoundment (impoundment) under RCRA interim status at the Mount Joy Wire manufacturing facility from 1983 to 1988 under RCRA ID No. PAD 003 023 371.

National Standard Company closed the impoundment in 1990. In 1991, National Standard Company sold the Mount Joy Wire manufacturing facility to the current owner, Mount Joy Wire Corporation. National Standard LLC continues to own, maintain, monitor and remediate the 1.4 acre area containing the closed impoundment. That area is now designated as the National Standard LLC Mount Joy Wire Impoundment facility or National Standard LLC Mount Joy Site (PADEP Permit). Figure 2.

In September 2006, PADEP assigned RCRA ID No. PAR 000 514 182 to the National Standard Impoundment. This Statement of Basis (SB) addresses only that area.

## Hazardous Waste Surface Impoundment

The impoundment was used for temporary storage of excess process wastewater prior to treatment in the on-site wastewater treatment plant. The impoundment was constructed in 1978 and operated until 1988, when it was taken out of service. The impoundment received manufacturing process waste containing acidic and alkaline liquids, and heavy metals.

The impoundment was constructed with a concrete base and a synthetic rubber (hypalon) liner over the concrete base. Wastewater stored in the impoundment was treated with lime slurry to precipitate out heavy metals from the wastewater.

In 1989, National Standard Company initiated closure of the impoundment, as described in Section 3.2 – Remedial Activities Completed. Closure activities were completed in June 1990, in accordance with the PADEP-approved Closure/Post Closure Plan. PADEP approved the final closure certification in January 1992.

Not all contaminated soil was removed during closure of the impoundment. Therefore, post closure care is required for the Facility. The post closure requirements are prescribed in the post closure permit issued by PADEP.

### Post-Closure Requirements

PADEP issued a post closure permit, Solid Waste Permit No. PAR 000 514 182 (Post Closure Permit), to National Standard LLC Mount Joy Site on April 25, 2008. The Post Closure Permit prescribes the post closure care requirements for the closed impoundment. The post closure requirements include:

- Monitoring and maintaining the cap, perimeter fence, groundwater monitoring system, and groundwater extraction system;
- Sampling and analysis of the groundwater; and
- Operation of the groundwater abatement system, to remove and treat hazardous constituents, until the groundwater quality meets the standards established in the Post Closure Permit.

The Post Closure Permit establishes Alternate Concentration Limits (ACLs) for groundwater quality at the Facility. The ACLs are based on EPA and PADEP review of the *National Standard Alternate Concentration Limit Demonstrate Report, September 2005*. The ACLs established in the Post Closure Permit ensure that constituents of concern at the Facility will not pose a hazard to human health or the environment as long as the ACLs are not exceeded at the downgradient point of compliance wells, WQMP-2 and WQMP-4A. The ACLs were determined through a site-specific evaluation, including toxicology calculations and fate and transport analysis. The ACLs for the Facility's constituents of concern are:

Boron (dissolved):	2.1 mg/l
Chloride:	360 mg/l
Iron (dissolved):	1.6 mg/l
Manganese (dissolved):	1.5 mg/l
Sodium (dissolved):	230 mg/l
Sulfate:	250 mg/l

The Post Closure Permit requires continued operation of the groundwater abatement program; a pump and treat system described in 3.2 – Remedial Activities Completed. The objective of the abatement system is to reduce groundwater contaminant levels to background and/or ACL concentrations. The objective is achieved when groundwater monitoring demonstrates that these levels have been achieved for three consecutive years.

## **Section 3: Environmental Investigations and Completed Actions**

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The Facility is directly underlain by carbonate rock that is prone to dissolution, especially along fractures. These fractures provide the major avenues for groundwater movement beneath the Facility. Primary fracture locations are shown on Figure 2. Several groundwater monitoring wells were located along these fractures to monitor these zones of increased groundwater flow.

The overall groundwater flow is northeast to southwest, toward Little Chickies Creek. However, the direction of groundwater flow may vary somewhat due to the nature of the fractures and solution-prone carbonate rock beneath the area, and the active groundwater extraction system at the Facility.

### **3.1 - Environmental Investigations**

#### **Groundwater Monitoring – Facility**

Groundwater monitoring began in October 1983 with 4 monitoring wells (i.e WQMP-1, WQMP-2, WQMP-3, and WQMP-4). During the first year of monitoring, samples were analyzed for a large list of parameters. Subsequently, the list was narrowed down and the samples were analyzed for the following constituents of concern, based on materials handled at the manufacturing plant: iron, lead, manganese, sodium, chloride, sulfate, and nitrate-nitrogen. Boron was added to the list of required analytes in 2002. In 2006, lead and nitrate-nitrogen were deleted from the list of analytes, as the monitoring history showed that they were not facility-related contaminants. The following field measurements are also presently collected: depth to water, dissolved oxygen, oxidation reduction potential, pH, specific conductivity, temperature and turbidity.

The initial groundwater samples identified facility-related contamination, specifically: iron, manganese, chloride, and sulfate. In 1984, 8 additional wells were added to the monitoring system (i.e. WLMP-1, WLMP-2, WLMP-3, WQMP-5, WQMP-6, WQMP-7, WQMP-8A, and WQMP-8C). In 1987, extraction well WQMP-4 was replaced by WQMP-4A. The groundwater was monitored on a quarterly basis from 1983 until 2006. The monitoring well locations are shown on Figures 2 and 3.

In 2006, PADEP approved modifications to the groundwater monitoring system, which were incorporated into the Post Closure Permit. These modifications were based on an evaluation of the groundwater quality data from 1984 through 2005:

- Reduction in the number of monitoring wells to four post closure wells: WQMP-2, WQMP-4A, WQMP-6, and WLMP-3;
- Closure of the remaining monitoring wells;
- Reduction in the frequency of monitoring to semi-annually; and
- Elimination of lead and nitrate-nitrogen from the list of required analytes.

The following modification to the monitoring system was accepted by PADEP on July 13, 2016, and is incorporated into the Post-Closure Permit Modification application:

- Reduction in the frequency of monitoring to every third quarter, to assess seasonal groundwater fluctuations while monitoring groundwater quality.

#### Groundwater Monitoring – Off-Site

Off-site groundwater wells were sampled on three occasions, in 1984, 2001 and 2005, to determine if contamination from the impoundment was impacting off-site groundwater. The well locations are shown on Figure 4. The groundwater samples were analyzed for the facility's constituents of concern, listed above. The scope of the sampling effort and the results are as follows:

- April 1984 – All wells within a ½-mile radius of the Facility, 7 wells, were sampled.
- June 2001 – Two wells (001 and 005) near/downgradient of the impoundment were resampled.
- April 2005 – 6 wells were sampled: 3 previously sampled wells (001, 002, and 005) and 3 newly sampled well locations (Greider Car Wash well and residential wells 008 and 009).

All off-site groundwater samples contained elevated levels of nitrate-nitrogen. Concentrations ranged from 5.2 milligrams/liter (mg/l) to 41 mg/l, compared to EPA's National Primary Drinking Water Standard Maximum Contaminant Level (MCL) of 10.0 mg/l. No other contaminants were detected above MCLs. All property owners were provided the results of the monitoring.

Nitrate-nitrogen is a common contaminant in agricultural areas, related to the agricultural use of chemical and organic fertilizers. Nitrate-nitrogen contamination in off-site wells is attributable to agricultural activity in the area for the following reasons:

- The nitrate-nitrogen concentrations in the Mount Joy Wire wells indicate that the contamination is not related to activities at the manufacturing plant or the closed impoundment, and
- The off-site contaminated wells are located in an agricultural area.

#### Surface Water

Surface water samples were collected from Little Chickies Creek in April 2005, upstream and downstream of the Mount Joy Wire Corporation NPDES outfall. The locations are noted on Figure 4. Both samples contained elevated levels of nitrate-nitrogen in similar concentrations, 10.5 mg/l. No other contaminants were detected above MCLs. As with the off-site groundwater samples, the nitrate-nitrogen contamination is attributable to agricultural activity in the area.

### **3.2 - Remedial Activities Completed**

#### Groundwater

National Standard Company/LLC has operated a groundwater contamination abatement program since 1985. Groundwater is extracted from the area of contamination around the closed impoundment and sent to the Mount Joy Wire wastewater treatment plant for treatment and discharge to Little Chickies Creek.

Historically, groundwater extraction has alternated among wells WQMP-4, WQMP-4A, WQMP-6, and WQMP-8C. As WQMP-4 and WQMP-8C were taken out of service, groundwater extraction alternated between wells WQMP-6 (continuously pumped) and WQMP-4A (pumped 2-weeks-on and 2-weeks-off). In 2013, per agreement between National Standard and Mount Joy Wire, PADEP agreed to allow National Standard to make changes to the remediation system and monitor for one year to determine if the altered groundwater abatement system would be acceptable prior to modifying the post closure permit to reflect the changes. Due to low yield from well WQMP-6, well WQMP-4A is now the sole extraction well. The PADEP-approved groundwater abatement system includes the following requirements:

- Extracted groundwater from Well WQMP-4A will not be used for non-contact cooling water in the Mount Joy Wire facility.
- The Mount Joy Wire facility will maintain compliance with the Mount Joy Wire NPDES Permit requirements.
- Flow to the industrial wastewater treatment plant will not be increased.
- National Standard will monitor the groundwater recovery system by means of a remote monitoring system.

Since February 2013, the extracted groundwater has been used at the Mount Joy Wire Corporation facility for process water (beneficial reuse) prior to treatment at the wastewater treatment plant. Treated water is discharged to Little Chickies Creek under NPDES Permit No. PA 004 2781.

Groundwater quality has improved significantly since the closure of the impoundment and the implementation of the groundwater extraction program.

#### Hazardous Waste Surface Impoundment

In 1984, after groundwater contamination was detected in the area of the impoundment, National Standard Company drained and inspected the impoundment. The inspection revealed holes in the hypalon liner and a break in the liner at the connection to the discharge pipe. The liner was repaired and the impoundment was returned to service.

The impoundment was closed in 1989/1990, in accordance with the provisions of the PADEP-approved closure/post closure plan.

Closure activities included:

- Removal and disposal of :
  - waste material remaining in the impoundment,
  - the hypalon liner,
  - the concrete base, and
  - contaminated soil;
- Backfilling the excavated area with clean soil/stone; and
- Construction of a multi-layer RCRA cap over the impoundment area.

Some contaminated soil was left in place beneath the backfill material and cap.

### **3.3 - Environmental Indicators**

EPA uses two *environmental indicators* (EIs) to evaluate a contaminated facility's progress toward meeting final cleanup standards. They are:

- Current human exposures under control (also referred to as Human Exposure EI), and
- Migration of contaminated groundwater under control (also referred to as Groundwater EI).

Based on an evaluation of all site characterizations, inspections, and environmental data, EPA and PADEP have determined that the Facility meets both the Human Exposure EI (3/31/2005) and the Groundwater EI (8/1/2016).

### **3.4 - Current Site Conditions**

#### **Groundwater**

National Standard LLC continues to operate the groundwater abatement system, as required by the Post Closure Permit.

The current groundwater quality at the Facility, based on the most recent two years of groundwater data, is summarized here. Contaminant concentrations in groundwater are compared to ACLs established for the Facility groundwater in the Post Closure Permit.

- WLMP-3 (background well), WQMP-4A, and WQMP-2 show no exceedance of ACLs.
- WQMP-6 exceeds the ACLs for chloride, manganese, sodium, sulfate and boron.

Note: In 2012, USEPA revised the boron drinking water Health Advisory to 6.0 mg/L, which is higher than the National Standard ACL (2.1 mg/L).

	Contaminant concentration mg/l	Secondary MCL (SMCL) or Health Advisory (HA) mg/l	ACL mg/l
chloride	906	250 (SMCL)	360
manganese	2.6	0.3 (HA)	1.5
sodium	236	20 (HA)	230
sulfate	381	250 (SMCL)	250
boron	5.8	6.0 (HA)	2.1

SMCL- EPA's National Drinking Water Standard Secondary Maximum Contaminant Level

HA - EPA's National Drinking Water Standard Health Advisory

#### **Surface Water**

The impoundment was capped after the removal of waste material, liner material, and the majority of the contaminated soil. Therefore, the potential for contaminant releases to surface water has been eliminated or reduced to an insignificant amount.



Surface water in Little Chickies Creek, both upstream and downstream of the Mount Joy Wire Corporation NPDES outfall in the Little Chickies Creek, was sampled in April 2005. The locations are noted on Figure 4. Only nitrate-nitrogen was detected at concentrations slightly above drinking water standards. This contaminant is attributable to agricultural activity.

#### Surface Soils

Contaminated surface soil was removed during the closure of the impoundment. Therefore, contaminated surface soil does not pose an exposure concern.

#### Subsurface Soil

Subsurface soil contamination was left in place during the closure of the impoundment. The contamination is not considered a potential exposure pathway because the area is capped and fenced.

#### Subsurface Vapor Intrusion (Indoor Air)

The closed impoundment is located outside of the manufacturing area. The impoundment was capped after the removal of waste material, liner material, and the majority of the contaminated soil. Therefore, the closed impoundment has no effect on indoor air quality.

## **Section 4: Corrective Action Objectives**

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### **1. Soil**

The corrective action objective for soil is to prevent exposure to contamination left in place within the capped area; and to prevent/restrict activities and land uses that would compromise the integrity of the cap.

### **2. Groundwater**

EPA expects final remedies to return usable groundwater to its maximum beneficial use within a timeframe that is reasonable given the particular circumstances of the project. For projects where aquifers are either currently used for water supply or have the potential to be used for water supply, EPA will use the National Primary Drinking Water Standard Maximum Contaminant Levels (MCLs) promulgated pursuant to Section 42 U.S.C. §§ 300f et seq. of the Safe Drinking Water Act and codified at 40 CFR Part 141).

While chloride, manganese, sodium, sulfate and boron are found at the Facility in concentrations that exceed ACLs, they were not detected in off-site residential wells at levels above MCLs, Secondary MCLs, or Health Advisories.

EPA's Corrective Action Objective for Facility groundwater is continued compliance with the approved ACL/background levels at the downgradient points of compliance wells, WQMP-2 and WQPM-4A.

## Section 5: Proposed Remedy

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The proposed remedy is continued compliance with the Post Closure Permit and the implementation of institutional controls (ICs). ICs are generally non-engineered mechanisms such as administrative and/or legal controls that minimize the potential for human exposure to contamination and/or protect the integrity of a remedy.

The proposed remedy will require National Standard LLC to implement land use restrictions to prohibit human exposure to contaminants. ICs may be established through an enforceable mechanism such as an order, permit or an environmental covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act. If the enforceable mechanism selected were to be an environmental covenant, it would be recorded with the Facility property records.

EPA's proposed remedy for National Standard Impoundment is:

1. National Standard LLC shall continue to comply with the terms and conditions of the Post Closure Permit, PADEP Solid Waste Permit No. PAR 000 514 182, including:
  - a. Maintenance of the impoundment cap and groundwater monitoring system; and
  - b. Operation of the groundwater abatement system to maintain compliance with ACL/background groundwater standards at the downgradient monitoring wells.
2. National Standard LLC shall implement land and groundwater use restrictions to prevent human exposure to contaminants or damage to the cap at the Facility through an Environmental Covenant pursuant to the Pennsylvania Uniform Environmental Covenants Act, 27 Pa. C.S. Sections 6501-6517, (UECA) to be recorded with the deed for the Facility property. The following restrictions shall apply to the Facility:
  - a) The Facility shall not be used for residential purposes;
  - b) Groundwater at the Facility shall not be used for any purpose, including but not limited to use as a potable water source, other than to:
    - i. operate the groundwater abatement system, including beneficial reuse of extracted groundwater as process water at Mount Joy Wire Corporation; and,
    - ii. to conduct the maintenance and monitoring activities required by PADEP and/or EPA;
  - c) No new wells will be installed at the Facility unless it is demonstrated to PADEP that such wells are necessary to perform post closure activities and PADEP provides prior written approval to install such wells;
  - d) The Facility shall not be used in any way that will adversely affect or interfere with the integrity and protectiveness of the impoundment cap, the groundwater monitoring system, or the groundwater abatement system; unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment and EPA provides prior written approval for such disturbance; and
  - e) All earth moving activities at the Facility, including excavation, drilling and construction activities, shall be conducted in a manner such that the activity will not pose a threat to human health and the environment or adversely affect or interfere with requirements of the Post Closure Permit. No such activities shall take place at the Facility unless PADEP provides prior written approval.

## Section 6: Evaluation of Proposed Remedy

Consistent with national guidelines, EPA evaluates proposed corrective action remedies in two phases. EPA first evaluates them against three threshold criteria. For those meeting the threshold criteria, EPA then evaluates seven balancing criteria.

Threshold Criteria	Evaluation
1) Protect human health and the environment	The primary human health and environmental threats posed by the Facility are related to direct contact with the contaminated soil remaining in place and any hazardous constituents leaching to the groundwater. These threats have been mitigated by the closure and post-closure activities under PADEP oversight and the continuing post closure care, including operation of the groundwater abatement system, required by the Post Closure Permit.
2) Achieve media cleanup objectives	Soil cleanup standards were met by the closure/post closure activities for the impoundment, including the removal of waste material and contaminated soil. Groundwater standards are met off-site. On-site contamination is confined to a small area that is being remediated, as required by the Post Closure Permit.
3) Remediating the source of releases	Remediation of source areas has been achieved by past closure activities, including waste removal and construction of a RCRA cap to prevent water infiltration through the remaining contaminated soil.

Balancing Criteria	Evaluation
4) Long-term effectiveness	The proposed land use restrictions will maintain protection of human health and the environment over time by controlling exposure to remaining contaminated soil. EPA anticipates that these restrictions will be implemented through an enforceable permit, order, or an environmental covenant to be recorded with the Facility property records.
5) Reduction of toxicity, mobility, or volume of the hazardous constituents	Toxicity, mobility, or volume of the hazardous constituents has been largely reduced by past remediation at the Facility. The physical barrier of the RCRA cap overlies the remaining soil contamination.
6) Short-term effectiveness	EPA anticipates that the proposed land use restrictions will be implemented shortly after EPA selects a final remedy.
7) Implementability	EPA's proposed remedy is readily implementable. EPA does not anticipate any regulatory constraints in requiring the Facility property owners to implement institutional controls described above.
8) Cost	The proposed remedy is cost effective. National Standard LLC has already completed the remedial activities, The costs associated with implementing the proposed land use restrictions would be minimal.

Balancing Criteria	Evaluation
9) Community acceptance	EPA will evaluate community acceptance during the public comment period and provide an analysis in the Final Decision and Response to Comments.
10) State/support agency acceptance	EPA will evaluate state acceptance during the public comment period and provide an analysis in the Final Decision and Response to Comments.

## Section 7: Financial Assurance

EPA is proposing that the financial assurance in place under the Post Closure Permit, a Collateral Bond in the amount of \$251,200, satisfies the financial assurance requirement. In addition, the mechanisms in place under the PADEP RCRA authorities to evaluate and modify the financial assurance on an annual basis are sufficient.

## Section 8: Public Participation

You are invited to comment on EPA's proposed remedy. The public comment period will last forty-five (45) calendar days from the date that notice is published in a local newspaper. Comments may be submitted by mail, fax, email, or phone to Maureen Essenthier at the address listed below.

EPA may hold a public meeting upon request. Requests for a public meeting should be made to Ms. Essenthier at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all information considered by EPA for the proposed remedy. It is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Maureen Essenthier (3LC30)  
Phone: (215) 814-3416  
Fax: (215) 814 - 3113  
Email: [essenthier.maureen@epa.gov](mailto:essenthier.maureen@epa.gov)

Date: 8-10-2016

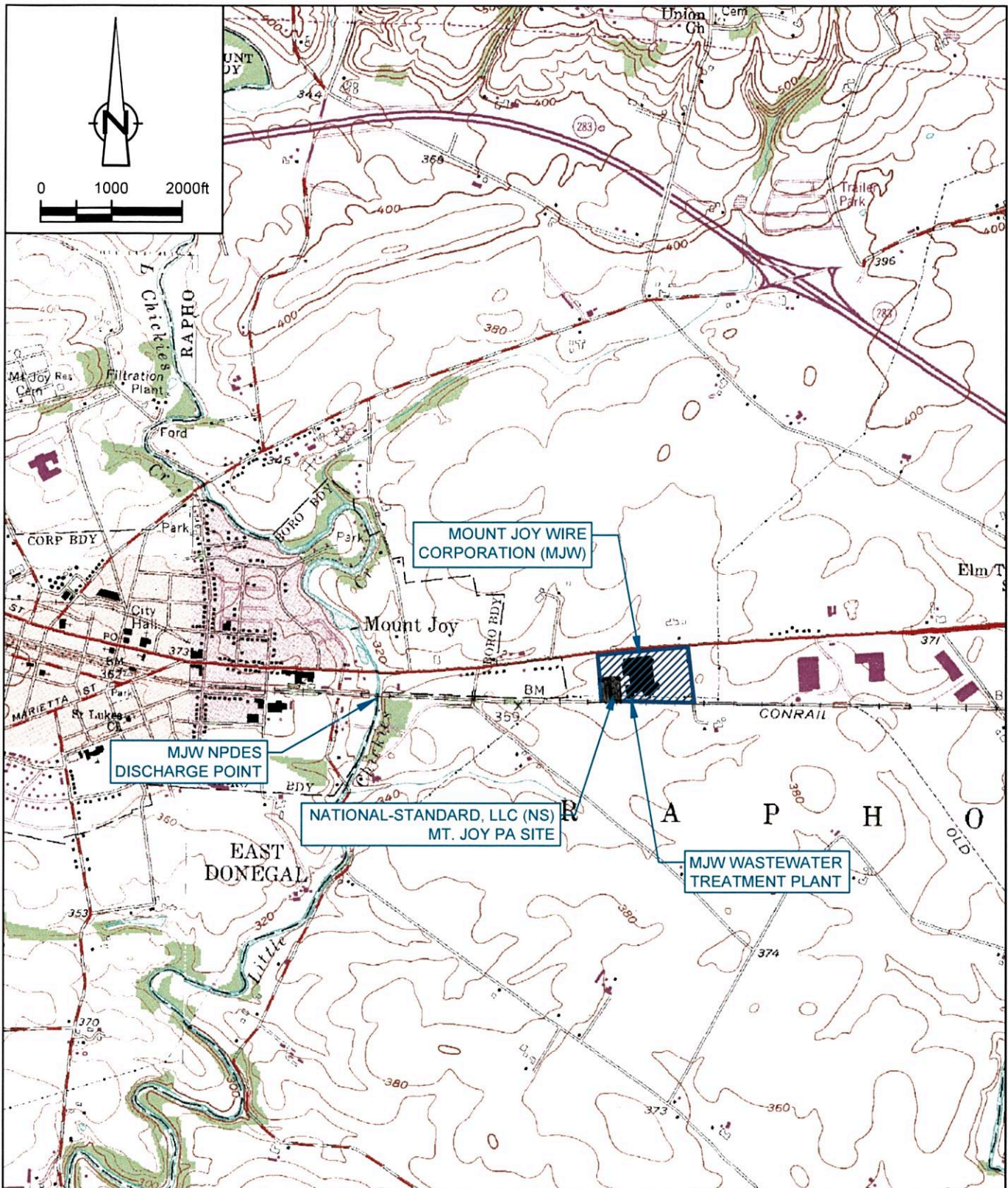
original signed by JAA  
John A. Armstead, Director  
Land and Chemicals Division  
U.S. EPA Region III

## Section 9: Index to Administrative Record

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1. Post Closure Permit Modification, PADEP approved August 2016
2. Post Closure Permit Modification review, PADEP, email dated 7/13/2016
3. Environmental Indicator Evaluation – Migration of Contaminated Groundwater Under Control, National Standard LLC, Mount Joy Wire Impoundment, EPA Region 3, 8/1/2016
4. Semi-Annual (Second Quarter) April 2016 Post Closure Groundwater Monitoring Report, May 2016, prepared by GHD for National Standard LLC
5. Groundwater Split Sample Analytical Results, Second Quarter 2016 Sampling Event, National-Standard, PADEP letter report, 6/8/2016
6. Semi-Annual (Fourth Quarter) October 2015 Post Closure Groundwater Monitoring Report, December 2015, prepared by GHD for National Standard LLC
7. Semi-Annual (Second Quarter) May 2015 Post Closure Groundwater Monitoring Report, June 2015, prepared by CRA for National Standard LLC
8. Post Closure Collateral Bond, National Standard LLC, 9/25/2015
9. Comprehensive Groundwater Monitoring Evaluation (CME – 2013), National Standard, ID No. PAR 000 514 182, PADEP, April 2013; including:
  - Appn. A, B, C, D – Groundwater monitoring data and assessment
  - Appn. G – Groundwater monitoring system modification request and evaluation
  - Appn. I – Post Closure Permit, National Standard LLC, ID No. PAR 000 514 182, issued by PADEP, 4/25/2008; including,
    - Attachment 1 – Closure/Post Closure Plan
10. Comprehensive Groundwater Monitoring Evaluation (CME – 2007), National Standard, ID No. PAR 000 514 182, PADEP, December 2006; including:
  - Appn. C - Off-site groundwater monitoring - 2005
    - Analytical results
    - PADEP letter report, 6/3/2005
  - Appn. F – Well abandonment plan
  - Appn. H – EPA/PADEP evaluation of National Standard Alternate Concentration Limit Demonstrate Report
11. RCRA Subtitle C Revised Notification for National Standard Impoundment, 5/5/2006
12. National Standard Alternate Concentration Limit Demonstrate Report, September 2005
13. Environmental Indicator Evaluation – Current Human Exposure Under Control  
Mount Joy Wire Corporation (Formerly National-Standard Company), EPA Region 3, 3/31/2005
14. Environmental Indicator Report for National Standard Company, prepared by PADEP for EPA, April 2003; including:
  - Attachment 7 - Off-site groundwater monitoring results for 1984 and 2001

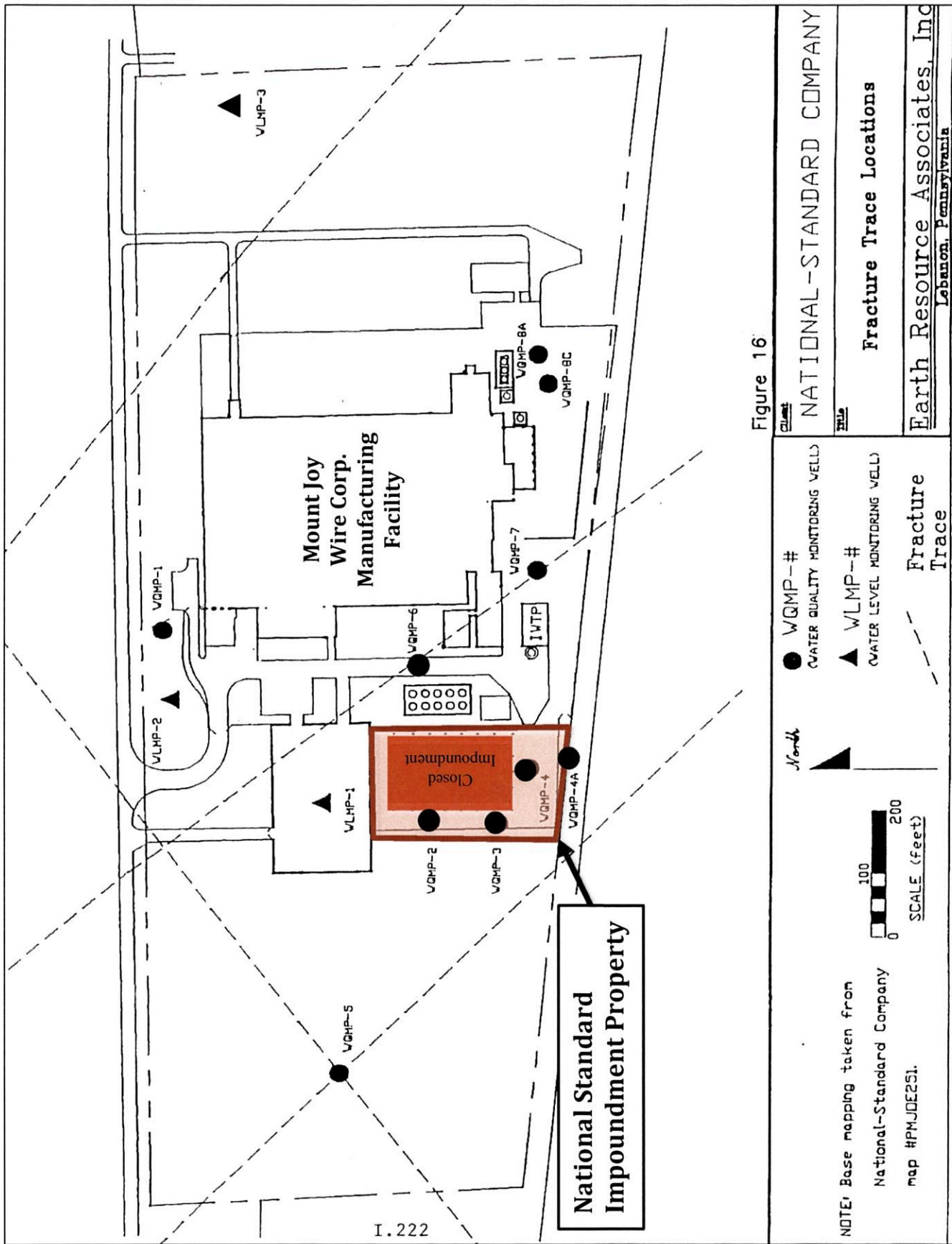




SOURCE: USGS QUADRANGLE MAPS: COLUMBIA EAST, COLUMBIA WEST, ELIZABETHTOWN, AND MANHEIM, PA.

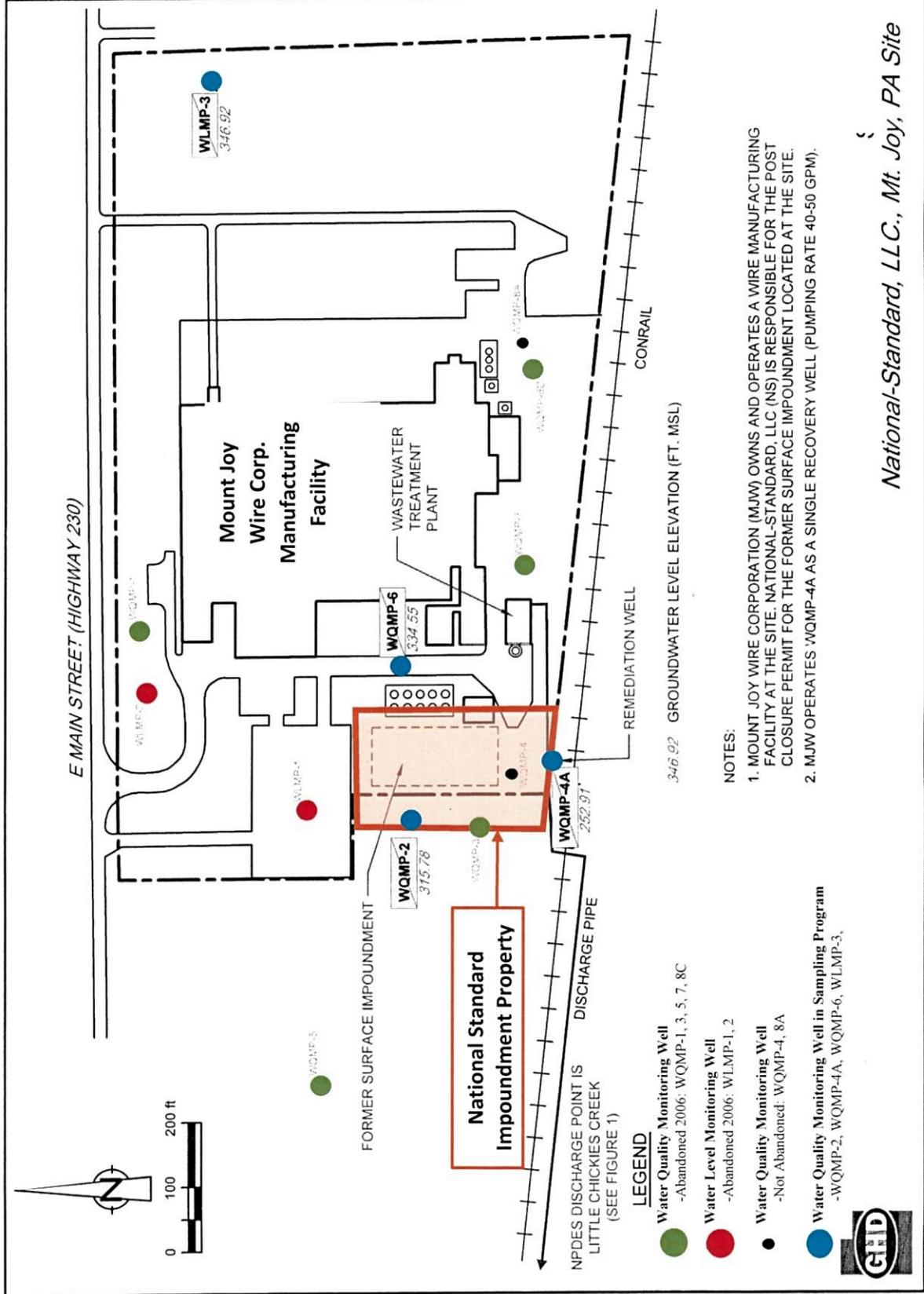
## NATIONAL STANDARD IMPOUNDMENT FIGURE 1 - Site Location map





**NATIONAL STANDARD IMPOUNDMENT**  
**FIGURE 2 - Site Layout**

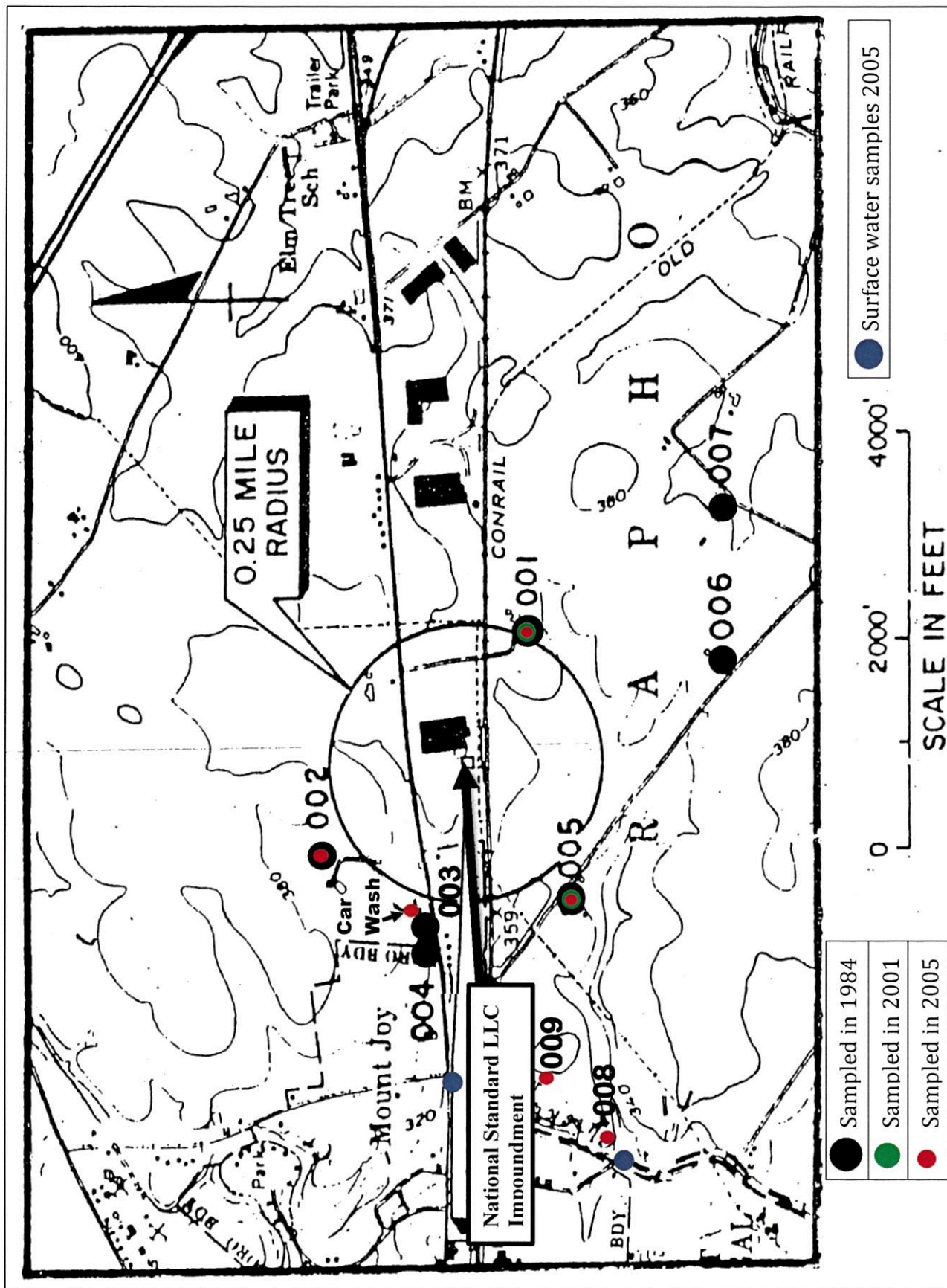




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**NATIONAL STANDARD IMPOUNDMENT**  
**FIGURE 3 – Groundwater Monitoring Well Locations – On-site**





**NATIONAL STANDARD IMPOUNDMENT**  
**FIGURE 4 – Groundwater Monitoring Well Locations – Off-site**