#### FIFTH FIVE-YEAR REVIEW REPORT FOR JACKSON LANDFILL SUPERFUND SITE Burlington County, New Jersey



Prepared by

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# LIST OF ABBREVIATIONS & ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
CEA	Classification Exemption Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
1,1-DCA	1,1-dichloroethane
DPE	Dual Phase Extraction
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
FYR	Five-Year Review
HI	Hazard Index
MCL	Maximum Contaminant Level
MW	Monitoring Wells
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NJDEP	New Jersey Department of Environmental Protection
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
PRP	Potentially Responsible Parties
RAO	Remedial Action Objectives
RD	Remedial Design
RI	Remedial Investigation
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
SVOCs	Semi-volatile organic compounds
TAL	Target Analyte List
TBC	To be considered
TCL	Target Compound List
UU/EE	Unlimited use and unrestricted exposure
VOCs	Volatile Organic Compounds
μg/l	Micrograms/liter
-	

## **I. INTRODUCTION**

The purpose of a five-year review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The U.S. Environmental Protection Agency (EPA) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)) and considering EPA policy.

This is the fifth FYR for the Jackson Landfill Superfund Site (Site). The triggering action for this statutory review is the June 22, 2015 completion date of the previous FYR for the Site. This FYR has been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one remedial phase, or operable unit, which is being addressed in this FYR.

The Site's fifth FYR team included Michelle Granger, EPA (remedial project manager), David Edgerton, EPA (hydrogeologist); Ula Filipowicz, EPA (human health risk assessor); Mike Clemetson, EPA (ecological risk assessor); Pat Seppi, EPA (community involvement coordinator); and Ross Hull, NJDEP, Case Manager. This is a state-lead site. The local government officials were notified of the initiation of the 5YR. The review began on 9/19/2019.

### Site Background

The Jackson Township Landfill Site (see Figure 1) is located off Lakehurst Avenue in Jackson Township, Ocean County, New Jersey. The landfill is situated on 135 acres of land in a regional reserve known as the New Jersey Pine Barrens, or Pinelands. Approximately 20 of the 135 acres were previously used for the disposal of various liquid, semi-liquid, and solid wastes.

Glidden Corporation owned the property comprising the Site and conducted surface mining operations within the property limits from 1961 to 1972 to recover the mineral ilmenite. In 1972, Glidden Corporation sold the property to Jackson Township. Jackson Township then began accepting municipal wastes at the landfill under a State permit to receive sewage sludge, septic tank wastes and solid wastes. Landfill operations commenced in the western portion of the property with the landfill accepting bulk liquid and semi-liquid coffee wastes, household refuse, tree stumps, construction debris, junked cars and liquid septage. Much of the liquid waste disposed of in the landfill contained volatile organic contaminants (VOCs) such as methylene chloride.

In 1977, there were multiple complaints associated with the use of area groundwater. Subsequent analysis of area groundwater ordered by the New Jersey Department of Environmental Protection (NJDEP) concluded that a portion of the Cohansey aquifer and several domestic wells

had been contaminated by the landfill. Contaminants detected in on-Site monitoring wells and off-Site potable wells included benzene, chloroform, methylene chloride and 1,1,1-trichloroethane. In 1978, NJDEP ordered Jackson Township to stop disposing of liquid wastes at the landfill. In 1980, the landfill was closed by order of the Superior Court of New Jersey. Furthermore, in 1980, a citizens lawsuit resulted in a municipal water system extension to residents affected or potentially affected by the landfill. The Site was proposed to be included on the National Priorities List (NPL) on December 30, 1982 and was included on the NPL on September 8, 1983.

For more details related to the Site background, physical characteristics, geology/hydrogeology, and land/resource please see the documents found in the Site repositories or at <u>https://www.epa.gov/superfund/jackson-township-landfill</u> (see section on webpage titled Site Documents and Data).

SITE IDENTIFICATION											
Site Name: JACKS	Site Name: JACKSON LANDFILL SUPERFUND SITE										
EPA ID: NJD980	EPA ID: NJD980505283										
Region: 2State: NJCity/County: Jackson Township, Ocean County											
	SITE STATUS										
NPL Status: Deleted											
<b>Multiple OUs?</b> No											
	REV	IEW STATUS									
Lead agency: State, N.	IDEP										
Author name (Federa	l or State Project N	Manager): Michelle Granger									
Author affiliation: Un	ited States Environ	mental Protection Agency									
Review period: 8/26/2	015-6/22/2019										
Date of site inspection	Date of site inspection: 11/25/2019										
Type of review: Statut	ory										
<b>Review number:</b> 5											
Triggering action date	e: 6/22/2015										
Due date (five years aj	ter triggering actio	<i>n date</i> ): 6/22/2020									

# FIVE-YEAR REVIEW SUMMARY FORM

## **II. RESPONSE ACTION SUMMARY**

### **Basis for Taking Action**

A Remedial Action Master Plan (RAMP) for the Site was completed by EPA in November 1984. The RAMP concluded that since no soil, surface water, sediment or biota sampling had been conducted at the Site, and because of discrepancies in groundwater sample handling procedures and sample handling methods, additional investigation of the Site was necessary.

In 1988, the NJDEP and Jackson Township entered into a Judicial Consent Order (JCO). Pursuant to this JCO, Jackson Township was required to conduct further Site investigation and remediation of the landfill, as necessary. In 1989 and 1990, Jackson Township conducted a remedial investigation (RI) at the Site. The Final RI Report was approved by NJDEP and EPA in 1991. Results of the RI indicated that groundwater contaminant levels had declined significantly since the landfill had been closed.

In addition, Jackson Township performed a risk assessment. The final risk assessment report was approved by NJDEP and EPA in July 1993. It determined that the Site did not present an unacceptable threat to human health. An ecological risk assessment was also conducted and indicated that the contaminant concentrations found at the site were below levels of concern.

### **Response Actions**

In the September 1994 ROD, the NJDEP, with EPA's concurrence, selected the "No Further Action with Maintenance and Monitoring" remedy for the Jackson Township Landfill Site. Based on the findings of the RI and risk assessment, the NJDEP and EPA determined that conditions at the Site posed no current or potential threat to human health and the environment.

Pursuant to the 1988 JCO, the final landfill closure would be conducted in a manner consistent with the NJDEP Solid Waste Landfill requirements, thereby satisfying all necessary regulatory requirements for the Site. Actions necessary to comply with NJDEP Solid Waste Landfill Closure requirements included: installation of a soil cap and surface water detention basins and post-closure groundwater and air monitoring.

NJDEP Ground Water Quality Standards were exceeded in only a few instances in the groundwater at the Site. Based on multiple groundwater sampling events extending from 1981 to 1993, it was determined that contaminant levels were decreasing.

### **Status of Implementation**

In June 1995, Jackson Township's consultant, GeoSystems, Inc., submitted the Jackson Township Landfill Closure Plan to the NJDEP, pursuant to the NJDEP's landfill closure requirements and 1988 JCO. In February 1996, NJDEP approved the Closure Plan. The Landfill Closure Plan included, but was not limited to, the design and implementation of the following:

• installation of final cover;

- a soil-erosion and sediment-control plan;
- groundwater monitoring;
- landfill-gas monitoring;
- a methane gas-venting or evacuation system;
- installation of a facility access control system (i.e., fence); and
- post-closure operation and maintenance activities.

There are no institutional controls associated with the "No Further Action" remedy. The site was deleted the Site from the NPL on September 13, 1995.

#### Systems Operation/Operations and Maintenance (O&M)

As part of the NJDEP Landfill Closure Plan, Jackson Township is responsible for conducting O&M activities at the Site, under oversight of the NJDEP. Since 1995, the Township has conducted landfill post-closure maintenance activities which include visually inspecting the cap and runoff drainage channels, inspecting locks and casings of monitoring wells, clearing vegetation from the cap and drainage channels, and performing sampling and analysis for the long-term groundwater and methane-gas monitoring program. Monthly site inspection reports are submitted to the State pursuant to the 1988 JCO.

Site inspections are conducted by the Township's contractor and/or Township personnel to ensure that the fence is in good repair and to look for signs of trespass. Any deficiencies which may be noted, such as plant growth requiring clearing and grubbing or removal of debris and minor fence repair, are addressed quickly by the Township.

### Landfill Gas Monitoring

As part of the 1995 Landfill Closure Plan, permanent monitoring locations were constructed to monitor methane gas which could migrate laterally from the landfill. Methane gas surveys were to be performed on a quarterly basis, in accordance with N.J.A.C.7:26-2A.8(h)9, at the fixed monitoring well locations around the perimeter of the landfill. If landfill gas is detected off-site at or above 25% of the lower explosive limit (LEL), then a corrective action plan, including a time table for implementation, shall be implemented.

In accordance with the closure plan, since 1995, Jackson Township's consultant has been performing quarterly monitoring of methane levels at monitoring well locations around the perimeter of the landfill. Around 2000, the concentrations of methane gas in the southwest corner of the Site increased. As a result, in 2003, NJDEP directed Jackson Township to perform quarterly off-site surveys to monitor methane gas migration, and, in 2004, to upgrade the on-site passive landfill gas collection system to include both an active landfill collection system and a passive collection system. This upgrade also included two (solar-powered) landfill gas flares and a 400 linear foot trench between one of the flares (Flare No. 1) and the adjacent property line to minimize potential off-site migration of methane. Quarterly off-site surveys continued in 2006. Since 2008, the active on-site landfill gas collection system has been operational.

In 2018, NJDEP issued a Modified Sanitary Landfill Closure and Post-Closure Plan that required methane gas surveys be continued around the southwestern perimeter of the landfill on a

quarterly basis. These methane gas surveys include 15 permanent monitoring points and the area immediately adjacent to the two landfill gas vent flares. If methane is detected at a monitoring location, additional monitoring is conducted at 25-foot intervals in all compass directions. Monitoring continues at these 25-foot intervals until values of 0% of the lower explosive limit are obtained. In accordance with the 2018 modification, Jackson Township's consultant has been performing quarterly methane gas surveys as specified in the modified closure plan.

Potential site impacts from climate change have been assessed, and the performance of the remedy is currently not at risk due to the expected effects of climate change in the region and near the site.

# **III. PROGRESS SINCE THE LAST REVIEW**

This section includes the protectiveness determinations and statements from the last FYR as well as the recommendations from the last FYR and the current status of those recommendations.

## **Protectiveness Determinations/Statements from the 2015 FYR**

OU #	Protectiveness Determination	Protectiveness Statement
1	Protective	The remedy at the Jackson Landfill Site is protective of human health and the environment.

There were no issues and recommendations in the last FYR.

# IV. FIVE-YEAR REVIEW PROCESS

# **Community Notification, Involvement & Site Interviews**

On October 1, 2019 the EPA Region 2 posted a notice on its website indicating that it would be reviewing site cleanups and remedies at Superfund sites in New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands, including the Jackson Landfill site. The announcement can be found at the following web address: <u>https://www.epa.gov/aboutepa/fiscal-year-2020-five-year-reviews</u>.

In addition to this notification, a public notice was made available on the following webpage: <u>www.jacksontwpnj.net/index.php/.../335-epa-public-notice</u> on 12/19/2019, stating that EPA is conducting a FYR for the site. The results of the review, as described in this report, will be available at the following website: <u>https://www.epa.gov/superfund/jackson-township-landfill</u>, as well as the Site information repository located at the Jackson Township Municipal Building, 95 West Veterans Highway, Jackson, New Jersey, and the EPA Region 2 offices, 290 Broadway, New York, New York 10007-1866.

## Data Review

As part of NJDEP's Solid Waste Landfill Closure Requirements, groundwater sampling events were conducted by the Township at the Site in 2015, 2016, 2017, 2018, and 2019. Samples were collected from four groundwater monitoring wells (see Figure 2) on an annual basis. The four monitoring wells sampled were MW-202A (upgradient), WD-1A (downgradient), 101R (on-Site), and 105R (on-Site). The results of these sampling events were submitted to NJDEP and EPA.

The groundwater underneath the Jackson Township Landfill falls into the category of Class I Groundwater of Special Ecological Significance since it is in the Pinelands Protection Area. The designated use of this Class I groundwater is the maintenance of special ecological resources and, therefore, these waters are non-degradation waters. To ensure protectiveness, concentrations of constituents in the upgradient well (202A) were compared with the on-Site monitoring wells (101R, 105R) and WD-1A, the downgradient well.

These four wells have been sampled since 2007 to monitor for VOCs, Semi-volatile organic compounds (SVOCs) and metals in groundwater. Well 202A is the upgradient well and lies outside the landfill perimeter, while well WD-1A is the downgradient well which lies within the landfill perimeter. Monitoring wells 101R and 105R are located within the landfill perimeter, nearby the south access gate along the access road.

VOCs were only detected above the NJDEP New Jersey Groundwater Quality Standard (NJ GWQS) (1  $\mu$ g/L) in well 101R located on the landfill; the VOC detected was benzene (Table 1). Benzene was detected at a maximum concentration of 1.7 micrograms per liter ( $\mu$ g/L). Historically, monitoring well 101R has had benzene concentrations ranging from 2 to 3.5  $\mu$ g/L. None of the other monitoring wells have detectable levels of benzene suggesting that the benzene is not migrating to downgradient wells. In 2016, 1,4 dioxane was analyzed for and was below levels of concern in all four monitoring wells. 1,4 dioxane was detected at a maximum concentration of 0.131  $\mu$ g/L in MW-105R which is below the NJDEP New Jersey Groundwater Quality Standard (0.4  $\mu$ g/L).

Bis(2-ethylhexyl)phthalate, a SVOC, was detected above the NJGWQS (3  $\mu$ g/L) in wells 202A (8.2  $\mu$ g/L in 2015), and 101R (4.7  $\mu$ g/L) and WD-1A (3.4  $\mu$ g/L) during the 2016 sampling event. Bis(2-ethylhexyl)phthalate was not detected in subsequent groundwater samples collected between 2017 and 2019. In addition, it was not detected during the previous five-year review period (2010-2015). The occurrence of bis(2-ethylhexyl)phthalate is irregular and spatially inconsistent among wells, suggesting the contaminant is transient. The presence of bis(2-ethylhexyl)phthalate in the upgradient well 202A, indicates it may not be Site related.

Aluminum concentrations in the upgradient well, 202A, have been fluctuating from 2015 through 2019. The detected concentrations in those last five years have been 1,780  $\mu$ g/L, 3,370  $\mu$ g/L, 3,220  $\mu$ g/L, 4,140  $\mu$ g/L, and 787  $\mu$ g/L, respectively. The downgradient well, WD-1A has reported aluminum concentrations of 770  $\mu$ g/L in 2015, 768  $\mu$ g/L in 2016, 1,030  $\mu$ g/L in 2017, 670  $\mu$ g/L in 2018, and 1190  $\mu$ g/L in 2019. Aluminum values are elevated and fluctuating in both

the upgradient and downgradient wells, suggesting that aluminum concentrations are not likely to be Site-related.

Iron has been greatly variable in the upgradient well, 202A, with the concentrations fluctuating from 393  $\mu$ g/L to 2,810  $\mu$ g/L. The same variability can be found in the two monitoring wells and the downgradient well. Iron concentrations in WD-1A were measured as 164  $\mu$ g/L, 308  $\mu$ g/L, 507  $\mu$ g/L, 167  $\mu$ g/L and 720  $\mu$ g/L from 2015 through 2019, respectively. Although the fluctuations are greater in the downgradient well, they also occur in the upgradient well suggesting that these fluctuations may be naturally occurring.

Iron and aluminum concentrations have been consistently elevated. These elements are naturally occurring and may be leaching as a result of landfill-related and/or naturally occurring low soil pH in the landfill. The maximum iron concentration was measured in Well 105R as 100,000  $\mu$ g/L in 2015.

Manganese concentrations in well 101R range from 131 to 175  $\mu$ g/L with the maximum concentration detected in 2019. Manganese concentrations in well 105R range from 42 to 87  $\mu$ g/L with the maximum concentration detected in 2015. Manganese concentrations have remained stable in well 101R but dropped below the NJGWQS (50  $\mu$ g/L) in well 105R during 2018 and 2019.

## Landfill Gas Monitoring

Recent 2018 and 2019 landfill gas sampling results show methane gas in excess of 25% LEL in 4 on-site gas monitoring wells located along the southwestern perimeter of the Site. Off-site landfill gas samples were collected in 25-foot intervals from the on-site locations where methane levels were detected above the LEL. Based on the quarterly surveys performed to date, methane gas does not appear to be migrating off-Site. NJDEP will continue to monitor quarterly landfill gas sampling data and will coordinate with the Township to ensure protection of human health and the environment. The Township will continue to vent and conduct landfill gas surveys per the NJDEP Modified Sanitary Landfill Closure and Post-Closure Plan issued in 2018.

Since the last reporting period, landfill gas sampling results indicate a decreasing number of onsite locations (along the southwestern perimeter) where methane gas was in excess of 25% LEL. There were 7 on-site gas monitoring locations with methane exceedances in 2014 and 4 on-site gas monitoring locations with methane exceedances in 2019.

## Site Inspection

The inspection of the Site was conducted on November 25, 2019. In attendance were Michelle Granger (EPA) and David Edgerton (EPA). The purpose of the inspection was to assess the protectiveness of the remedy. A fence is present around the perimeter of the Site to restrict unauthorized access. There is a soil and washed gravel cap which covers the Site. Although not part of the selected remedy, these protective measures serve to minimize the potential for exposure to any contaminants which may remain at the Site.

No issues were observed during the site visit.

## V. TECHNICAL ASSESSMENT

**QUESTION A:** Is the remedy functioning as intended by the decision documents?

#### **Question A Summary:**

The 1994 ROD called for no further action with maintenance and monitoring. Additionally, the ROD provided for the closure of the Jackson Township Landfill as required by New Jersey regulations. Actions necessary to comply with NJDEP Solid Waste Landfill Closure requirements included the following: installation of a soil cap and surface detention basins, and post-closure groundwater and air monitoring. These actions have been taken. A fence is present around the perimeter of the Site to restrict unauthorized access. There is a soil and washed gravel cap which covers the Site. These protective measures comply with the NJDEP regulations governing solid waste and serve to minimize the potential for exposure to any contaminants which may remain at the Site. The DEP regulations require regular groundwater monitoring. Residences in the vicinity of the Site are supplied by the public water system. Groundwater data has been collected and analyzed from 2015 through 2019. The groundwater monitoring over the past five years indicates that the landfill is not contributing significantly to groundwater contamination. No Site-related contaminants were found in the downgradient monitoring well above the NJGWQS or background levels. Landfill gas monitoring has been conducted from 2015 through 2019. Recent 2018 and 2019 on-site gas sampling results continue to indicate exceedances of methane gas still exist along the southwestern perimeter of the landfill. However, elevated methane concentrations have not been observed off-Site. Also, since the previous reporting period, landfill gas sampling results indicate a decreasing number of on-site locations (along the southwestern perimeter) where methane gas was in excess of 25% LEL. There were 7 on-site gas monitoring locations with methane exceedances in 2014 and 4 on-site gas monitoring locations with methane exceedances in 2019. Both the active and the passive systems are operating in a manner that remains protective of human health and the environment.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no physical changes to the Site that would adversely affect the protectiveness of the remedy. Land use assumptions, exposure assumptions and pathways considered in the decision document followed the Risk Assessment Guidance for Superfund used by the Agency and remain valid. Although specific parameters may have changed since the time the risk assessment was completed, the process that was used remains valid. Remedial action objectives were not identified in the ROD, and hence they could not be evaluated in this review.

As summarized in the 1994 ROD, the results of the baseline risk assessment indicated that the current and potential future risks, both carcinogenic and non-carcinogenic, associated with the

chemicals of concern for all media at the site were within or below EPA's threshold levels. Based on these conclusions, the ROD called for no further action with maintenance and monitoring. The ROD also acknowledged the closure of the Jackson Township Landfill as required by NJ regulations.

As a result of the soil/washed gravel cap covering the landfill and perimeter security fencing restricting access to the site, the potential for direct contact with residual contamination with site soils has been minimized. Exposure to contaminated groundwater beneath the site also continues to be an incomplete pathway as all residents in the vicinity of the site are currently connected to the public water supply.

With the permission of Jackson Township, a model airplane club currently utilizes a small area in the southern corner of the landfill cover for its aero modeling activities. As concluded previously, the use of this portion of the landfill cover is consistent with the selected remedy.

The subsurface vapor intrusion (VI) into indoor air pathway is evaluated when soils and/or groundwater are known or suspected to contain volatile organic compounds (VOCs). Review of groundwater analytical data collected during the timeframe of this five-year review (2015-2019), show benzene as the only VOC detected above the NJGWQS of 1  $\mu$ g/L. More specifically, onsite monitoring well 101R showed slight exceedances of benzene ranging from 1.2 to 1.7  $\mu$ g/L. To ensure protectiveness, the maximum detection of benzene (1.7  $\mu$ g/L in 2015) was compared to its risk-based groundwater vapor intrusion screening level (VISL). The results of the analysis indicate that the benzene detections continue to fall well within an acceptable risk range. Moreover, there are currently no buildings overlaying the localized benzene detection in the vicinity of monitoring well 101R. Based on these considerations, the vapor intrusion pathway remains incomplete and additional vapor intrusion investigations are not necessary at this time.

**QUESTION C:** Has any other information come to light that could call into question the protectiveness of the remedy?

No new information has called into question the protectiveness of the remedy.

## **VI. ISSUES/RECOMMENDATIONS**

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the Five-Year Review:	
OU1	

# VII. PROTECTIVENESS STATEMENT

	Protectiveness Statement(s)
<i>Operable Unit:</i> OU1	Protectiveness Determination: Protective
Protectiveness Stat The remedy at Ja environment.	ement: ckson Landfill Superfund Site is protective of human health and the

# **Sitewide Protectiveness Statement**

Protectiveness Determination: Protective
<i>Protectiveness Statement:</i> The remedy at the Jackson Landfill Superfund Site is protective of human health and the environment.

# VIII. NEXT REVIEW

The next five-year review report for the Jackson Landfill Superfund Site is required five years from the completion date of this review.

# **APPENDIX A – Tables**

TA	BL	Æ	1:
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#### SUMMARY ANALYTICAL RESULTS FOR GROUNDWATER (2015 TO 2019)

GWQC	Well ID		101R					105R				
(µg/L)	Year	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	
	VOCs		-		-		-	-	-	-		
1	Benzene	1.7	0.82	1.6	1.2	1.5	0.46	0.31		0.5U	0.5U	
0.4	1,4-dioxane		0.13J					0.16U				
	SVOCs											
3	bis(2-Ethylhexyl)phthalate	1.8J	4.7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	
	Target Analyte List											
200	Aluminum	17	8	10	8J	9	17	187	6	4J	4	
300	Iron	90,600	75,500	91,300	80,200	93,300	100,000	75,800	95,000	43,800	5,520	
50	Manganese	133	147	155	131	175	87	91	76	40	42	

GWQC	Well ID	202A					WD-1A				
(µg/L)	Year	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
	VOCs										
1	Benzene	0.5U	0.5U		0.5U	0.5U	0.5U	0.5U		0.5U	0.5U
0.4	1,4-dioxane		0.16U					0.16U			
	SVOCs										
3	bis(2-Ethylhexyl)phthalate	8.2	0.5U	0.5U	0.5U	0.5U	0.5U	3.4	0.5U	0.5U	0.5U
	Target Analyte List										
200	Aluminum	1,780	3,370	3,220	4,140	787	770	768	1,030	670	1,190
300	Iron	393	472	434	520	2,810	164	308	507	167	720
50	Manganese	31	44	26	33	26	30	21	26	30	23

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μg/L = micrograms per liter, --- = not analyzed for this compound, U = non-detect, J = estimated below the reporting limit, GWQC = groundwater quality criteria, VOC = volatile organic compound, SVOC = semi-volatile organic, **BOLD** = exceeds GWQS

1. Only contaminants that exceed their maximum contamination limited are listed.

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# **APPENDIX B – Figures**

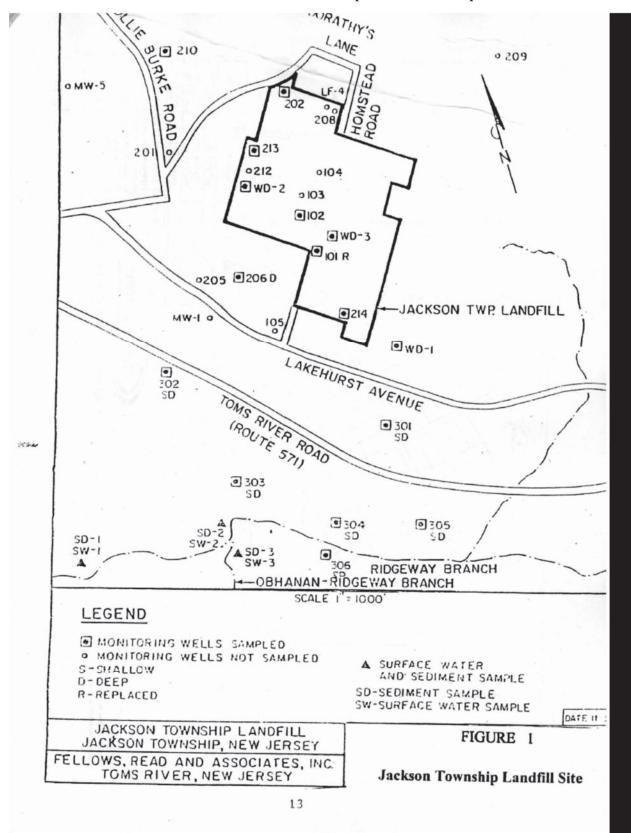


FIGURE 1 – Jackson Township Landfill Site Map

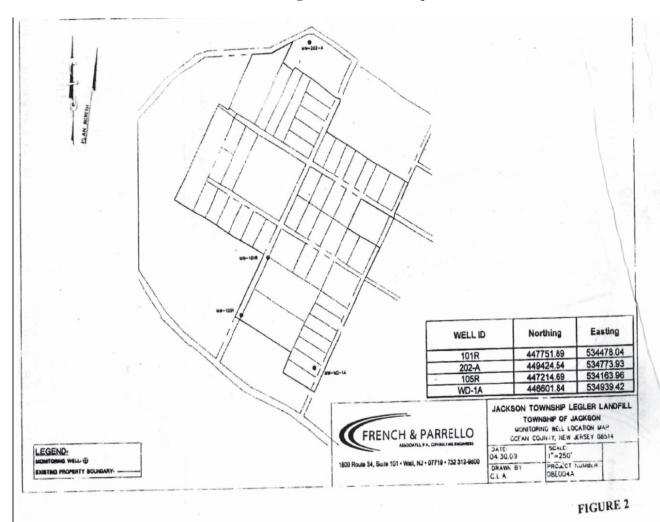


FIGURE 2 – Monitoring Well Location Map