

**SOLID AND HAZARDOUS WASTE MANAGEMENT SECTION
LONG-TERM STEWARDSHIP INSPECTION**

FACILITY: Johnson Controls
700 N Broad St.
Middletown, DE 19709

EPA ID: DED002353092

DATE OF ASSESSMENT: June 9, 2015

SHWMS REPRESENTATIVES: Benjamin Mack - Environmental Scientist (SHWMS)

EPA REPRESENTATIVES: Joel Hennessy - Region 3, Land and Chemicals Division
Stacie Pratt - Region 3, Land and Chemicals Division
John Hopkins - Region 3, Land and Chemicals Division
Marilyn St. Fleur - Region 1, Land and Chemicals Division

SITE REPRESENTATIVES: Jeff Bendelewski – Environmental Manager
Todd Treybal – Plant Manager
Debbie Hastings – Regional Manager
Bill Gilbert – Technical Services Manager

REPORT SUBMITTED TO: Nancy C. Marker, Environmental Program Administrator

REFERENCE: Johnson Controls, File Code: 70
15 0609 70 Johnson Controls LTS Report

BACKGROUND:

Johnson Controls Battery Group, Inc. (JCBGI) is a manufacturer of lead-acid batteries. Their 16.2-acre facility is located in Middletown, DE. Benjamin Mack has been the project officer for the facility since November 2014.

A Soil Management Plan (SMP) was approved in 2001, in which eight “Remediation Areas” were delineated. The SMP also required certain land use restrictions to be placed on the property. Implementation of these land use restrictions occurred in the form of an Environmental Covenant, which was enacted on June 16, 2009. SHWMS and EPA representatives conducted a Long-Term Stewardship (LTS) inspection on June 9, 2015 to determine the efficacy of all Institutional and/or Engineering Controls (ICs/ECs), as well as compliance with all other conditions of the SMP and Environmental Covenant.

For the purpose of this inspection, steel-toed shoes, hearing protection, and safety glasses were deemed appropriate personal protection equipment for the areas in which the inspection took place.

On June 9, the weather was mostly sunny with the temperature in the mid 80’s. An aerial photograph with outlined Remediation Areas is **Attachment #1**. Photographs of the Remediation Areas (as determined by the Environmental Covenant) are in **Attachment #2**.

CONDITIONS OF REMEDIATION AREAS:

Remediation Area A: Area A encompasses the southwest corner of the facility and is currently used for storage of empty truck trailers (Pictures 1 and 2). Area A is a paved area that is bordered by a fence that surrounds the facility. Soil sampling, excavation, and removal occurred in this area from 1998-1999 in response to a release of 75 pounds of lead dust in a 10 hour period on March 8 and 9, 1983. After soil removal, the area was paved with asphalt to limit worker exposure to any remaining contaminated soil.

Observations: No cracks in the asphalt were observed. The facility fence also appeared to be intact and functioning properly. No evidence of digging or other earth-moving activities were observed. No violations of the Environmental Covenant or SMP were observed.

Remediation Area B: Area B encompasses the southwestern edge of the main facility building (Pictures 3 and 4). This area is used for receiving shipments by truck and has multiple doors for off-loading trailers. Area B is paved with asphalt. Wooden planks overlay the asphalt near the receiving doors. A set of abandoned railroad tracks were also observed.

Part of Remediation Area B was sampled and remediated in 1998-1999. The rest of this area was paved over with asphalt. As such, lead-impacted soils remain in place beneath the asphalt. There are two future projects planned in Area B which may cause the SMP to be triggered. The first project will consist of patching the asphalt within and adjacent to Area B and to pave over the abandoned railroad tracks, and the second project is to construct a new outlying building to house part of the Oxide process employed at the facility.

Observations: No cracks were observed in the asphalt cover within Area B. However, paved areas south of the main facility building are beginning to crack. The facility stated that they would be patching these areas in the early summer of 2015, as well as paving over the abandoned railroad tracks. The construction of the new outlying building will occur within the next five years. No evidence of current digging or other earth-moving activities were observed. No violations of the Environmental Covenant or SMP were observed.

Remediation Area C: Area C encompasses the southeastern edge and corner of the main building up to the employee entrance and consists of a grass strip with a sidewalk in the middle of the grass (Picture 5). This area was sampled, excavated, and remediated in 1998-1999.

Observations: Vegetation appeared to be healthy and well-maintained. No visible cracks were observed in the sidewalk. No evidence of digging or other earth-moving activities were observed. No violations of the SMP or Environmental Covenant were observed.

Remediation Area D1: Area D1 includes the grassy area at the northeastern edge of the southern stormwater tank (Picture 6). This area is bounded by the fence for the southern stormwater tank on the southwest, a grassy strip on the south, and the employee entrance to the facility on the north. This area was sampled, excavated, and remediated in 1998-1999.

Observations: Vegetation appeared to be healthy and well-maintained. No visible cracks were observed in either the sidewalk or the road. The security fence surrounding the stormwater tank

appeared to be intact and functioning properly. No evidence of digging or other earth-moving activities were observed. No violations of the SMP or Environmental Covenant were observed.

Remediation Area D2: Area D2 includes a grassy strip approximately 350 ft. x 50 ft. that borders the western side of Broad St (Picture 7). This area was sampled, excavated, and remediated in 1998-1999.

Observations: Vegetation appeared to be healthy and well-maintained. No evidence of digging or other earth-moving activities were observed. No violations of the SMP or Environmental Covenant were observed.

Remediation Area D3: Area D3 includes a grassy strip approximately 150 ft. x 50 ft. that is bordered by Broad St on the east and a parking lot on the west (Picture 8). This area was sampled, excavated, and remediated in 1998-1999.

Observations: Vegetation appeared to be healthy and well-maintained. No evidence of digging or other earth-moving activities were observed. No violations of the SMP or Environmental Covenant were observed.

Remediation Area E: Area E includes a grassy area on the northeastern corner of the main facility building (Picture 9). This area was sampled, excavated, and remediated in 1998-1999.

Observations: Vegetation appeared to be healthy and well-maintained. The security fence appeared to be intact and functioning properly. No cracks were observed in the asphalt adjacent to Remediation Area E. No evidence of digging or other earth-moving activities were observed. No violations of the SMP or Environmental Covenant were observed.

Remediation Area F: Area F is approximately a 25 ft. x 25 ft. area that is located near the facility's baghouses (Picture 10). This area is completely paved with asphalt. During the lead dust release in 1998, lead-contaminated sediment accumulated on top of the asphalt. However, no sampling, excavation, or other remediation activities occurred in Area F during this time because the entire region near the baghouses was paved and the lead-contaminated sediment was promptly removed.

Observations: Some cracking of the asphalt was observed. Facility representatives stated that they would be patching the asphalt in this area in the early summer of 2015. No evidence of current digging or other earth-moving activities were observed. No violations of the Environmental Covenant or SMP were observed.

CONCLUSIONS/RECOMMENDATIONS:

A letter of compliance is recommended for the Environmental Covenant and SMP conditions inspected on June 9, 2015.

Attachment 1: Map of Johnson Control Remediation Areas



Attachment 2: Facility Photos



Picture 1. Remediation Area A facing South-southwest.



Picture 2. Remediation Area A facing west.



Picture 3. Remediation Area B facing east.



Picture 4. Remediation Area B facing west.



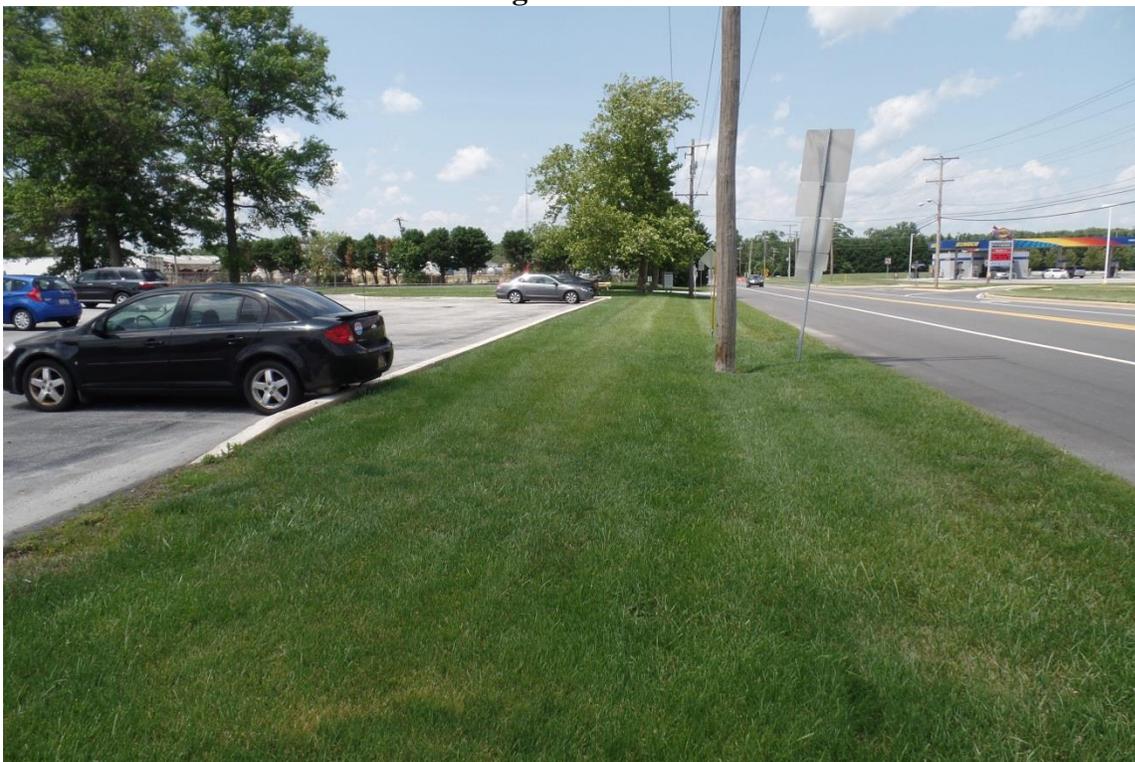
Picture 5. Remediation Area C facing north-northwest.



Picture 6. Remediation Area D1 facing south-southeast.



Picture 7. Remediation Area D2 facing south-southeast.



Picture 8. Remediation Area D3 facing north-northwest.



Picture 9. Remediation Area E facing south-southeast.



Picture 10. Remediation Area E facing west.



Picture 11. Remediation Area F facing north-northwest.