Minor
OPERATION AND MAINTENANCE
Activity Plan

Grout Manhole P5 Near 704-55H

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Signed per telecon for Jewel Lenderman 3/6/2023

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1. INTRODUCTION

This Operations and Maintenance (O&M) Plan is to grout manhole P5 near 704-55H to segregate the H-Area Inactive Process Sewer Lines (HIPSL) from the active sewer lines. This O&M Plan is being prepared to document the work being conducted to prevent unintended flow through HIPSL at manhole P5 that might result in a potential release to the environment. Although most O&M plans include excavation, no excavation is required for this action. The work meets the definition of an O&M activity because it is required to maintain or support the operations of a facility. It is considered a minor intrusive O&M activity because it impacts less than 10 percent of the surface area of the unit. This work will be within Site Index (SI) 142 (H-Area Inactive Process Sewer Lines from Building to Manhole P-44, 081-H of the Federal Facility Agreement (FFA), Reference 1; Attachment 2). The work will also be within the 200-foot boundary of SI 344 (Sandblast Area CMH-001, NBN; FFA, Reference 1; Attachment 3) and within the 20-foot buffer zone of SI 591 (H-Area Process Sewer Lines as Abandoned, NBN; FFA, Reference 1; Attachment 4).

In March 2022, acidic liquid was found at the HP-50 monitoring location in H-Area. The source of the unknown liquid was found to be the Recycle Sump located in H-Canyon Outside Facilities (X-ESR-H-01151, Reference 2). Acidic liquid was released from the Recycle Sump through the HIPSL to manhole P68. The HIPSL connection to manhole P68 was previously plugged and grouted. Manhole P68 receives industrial wastewater and connects to manhole P12, which discharges to HP50. Resulting investigation of the release identified failures at three plugs throughout the system. These plug failures enabled releases through the abandoned vitreous clay process sewer line.

The Recycle Sump near the GPE was isolated by installing a grout plug into the 6" steel/V.P riser (M-DCF-H-14096, Reference 3). This removed the source of the release. The failed plug and grouting at manhole P68 will be repaired, restoring the manhole to its preexisting condition, and eliminating the connection between the HIPSL and the active process sewer line (C-DCF-H-04699, Rev. 3, Reference 4).

This action will further limit and essentially remove the threat of water flow through the HIPSL by restricting water from flowing past P5 (infiltrated rainwater or other potential water sources) and will further restrict the buildup of hydraulic pressure on the P68 plugs. The proposed action at P5 will prevent unintended process flow through the HIPSL that could result in any future potential release.

In summary, actions taken at the Recycle Sump control the source by preventing acidic process liquid from entering the HIPSL. Repair actions taken at P68 will seal the point where the HIPSL and active process sewer lines connect to control the release point. Actions taken at P5 further mitigate the risk of the potential flow and release through the HIPSL and alleviate hydraulic pressure on the plugs at P68.

2. AREA DESCRIPTION AND CONDITIONS

The location of the work is shown on the Map provided in Attachment 1. The approximate location of the proposed work in relation to SI 142, 344, and 591 are shown on Attachments 2 and 3, respectively. The area in which the activity will be conducted is in the drainage basin of

H-Canyon Wastewater Outfall H-04B (Attachment 5).

For a discussion of the SIs, see "Revision 0 for Appendix C for Fiscal Year 2022" of Reference 1. SI 142 is in the FFA because of possible radiological or chemical contamination from past releases from Site operations. To date there has been no remediation of these units, and the status of the units is inactive. Per Appendix E of Reference 1, Remedial Actions are scheduled to begin in April 2043 for SI 142.

3. O & M ACTIVITY

A. O&M Activity Description

The scope of the activity is to cut the polybutylene lines that run along the old process sewer and plug them. Expandable foam will then be employed to form a foam plug in the upstream 18-inch vitreous pipe to prevent water from entering manhole P5. The manhole will be grouted utilizing a grout mix design designation ZB-FF-8-D to permanently plug P5. The cut pieces of polybutylene line will remain in the manhole and be grouted in place.

Work is expected to take three weeks.

B. O&M Activity Sampling and Monitoring for Health and Safety

The identified units are in the FFA because of possible radiological contamination from past releases from Site operations.

Radiological surveys will be required during construction within the buffer zone. If radiological contamination is encountered, Rad Protection will determine if protective equipment and/or personnel access restrictions are required.

The work area will be barricaded with rope or rigid handrail to ensure that access is controlled for personnel safety around the work area. Worker health and safety will be directed and controlled as required in the work package and Assisted Hazard Analysis (AHA).

C. Health and Safety Plan

The health and safety concerns involve worker exposure to unknown waste material that could be generated. The work will be completed in accordance with the requirements stated in the AHA. The safety requirements and personal protective equipment described in the AHA are appropriate for the construction work.

D. Characterization and Sampling Plan for the Affected Area within the Unit

No material will be removed under this scope of work. If any unknown waste material is generated as part of this repair, a Timeout will be taken and the Shift Operations Manager (SOM), ECA, and the Maintenance/Site Services Manager will be notified until the Timeout is resolved.

E. Contaminated Materials Management and/or Disposal

Radiological contamination could be present within manhole P5. All waste will be disposed

in accordance with guidance from Rad Protection, the Generation Certification Official (GCO), and the ECA.

F. Environmental Plans and Permit Modification Requests

This activity is not expected to involve other environmental plans / permits, required maintenance, and inspections, or erosion control practices.

Stormwater and sediment control shall be managed per SRS Manual 3Q, Procedure 12.2 (Reference 5).

4. CONTINGENCY PLAN

During implementation of the activity, if the conditions change at any time such that the activity is no longer considered "minor" (as defined in Reference 2) or any other unanticipated event occurs, the Project Manager, the Project Construction Manager, or the ECA shall:

- Immediately notify the SRNS-OSC. If necessary, the SRNS-OSC will notify the DOE-OSC.
- Stop work, secure the area, contain, and stabilize the area, and determine any necessary change to the activity plan.
- Notify the SRNS-OSC of the findings and proposed path forward. The SRNS-OSC will communicate the information to the DOE-OSC and obtain concurrence on the path forward.

5. DOCUMENTATION & REPORTING

H-Canyon will transmit the following documentation to the SRNS-OSC within twenty days of the completion of the activity:

- The signed O&M plan
- Any sampling and characterization data collected

The following information is not expected to be generated by this activity, but, if generated, will be forwarded to the SRNS-OSC:

- The quantity (if any) of any contaminated materials generated, and
- The disposal location of any contaminated materials, if generated.

Attachments

Attachment 1. Drawing Showing Location of Manhole P5.

Attachment 2. Map Showing Portion of Site Index 142, H-Area Inactive Process Sewer Lines from Building to Manhole P-44.

Attachment 3. Map Showing Portion of Site Index 344 Sandblast Area CMH-001.

Attachment 4. Map Showing Portion of Site Index 591, H-Area Process Sewer Lines as Abandoned, NBN.

Attachment 5. H-04B Outfall Drainage Map with Location of Manhole P5.

Attachment 6. Photo showing physical Location of Manhole P5.

References

1. SRNS-OS-94-42, Federal Facility Agreement for the Savannah River Site, Administrative Document Number 89-05-FF, effective August 16, 1993, Revision 0 of Appendix C and Revision 0 of Appendix E for Fiscal Year 2022.

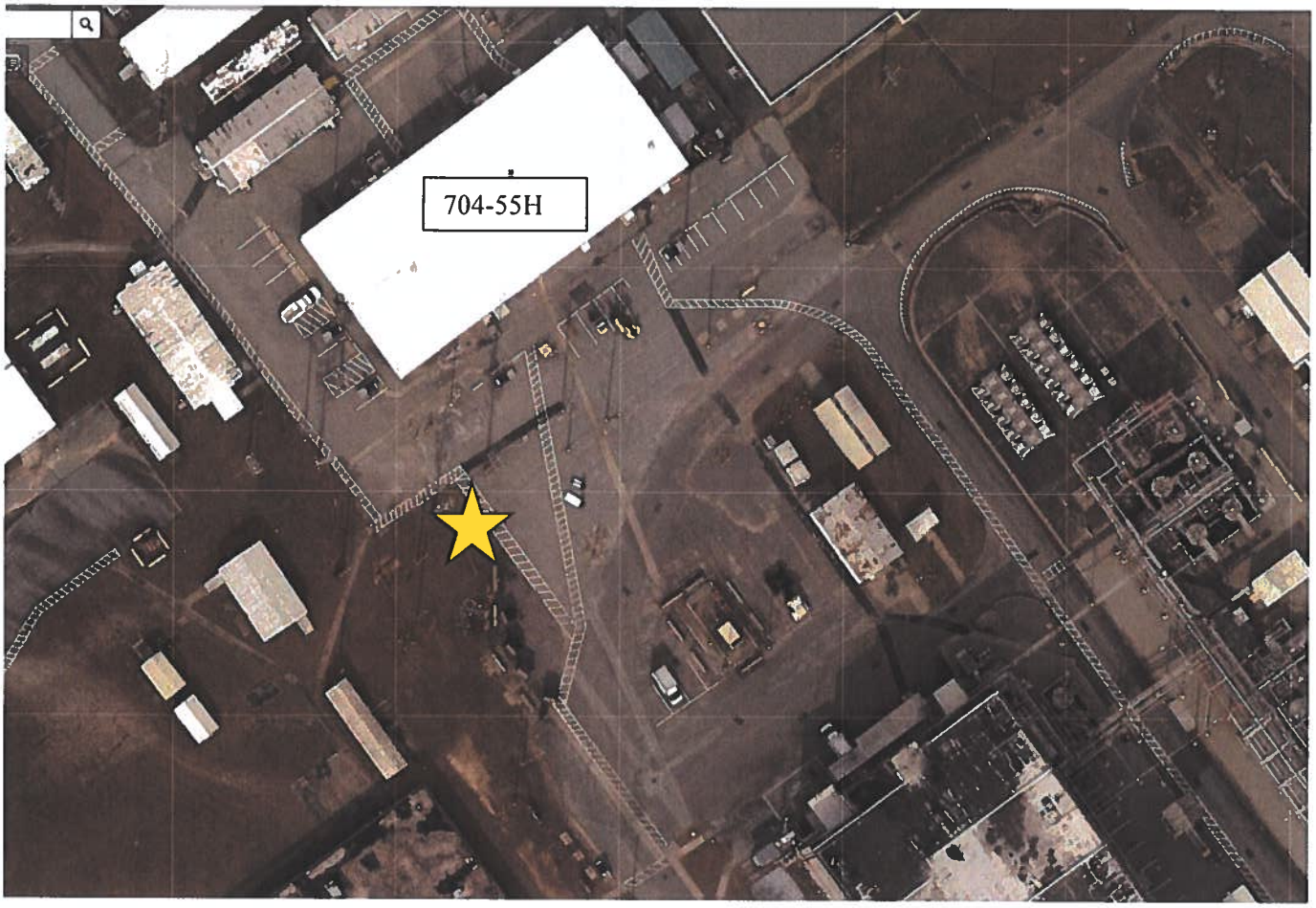
2. X-ESR-H-01151, HP-50 Acidic Solution Investigation and Remediation, November 2022.

3. M-DCF-H-14096, Placement of Grout Plug in 6" Underground GPE Sewer Pipe Riser – HOF, January 17, 2023.

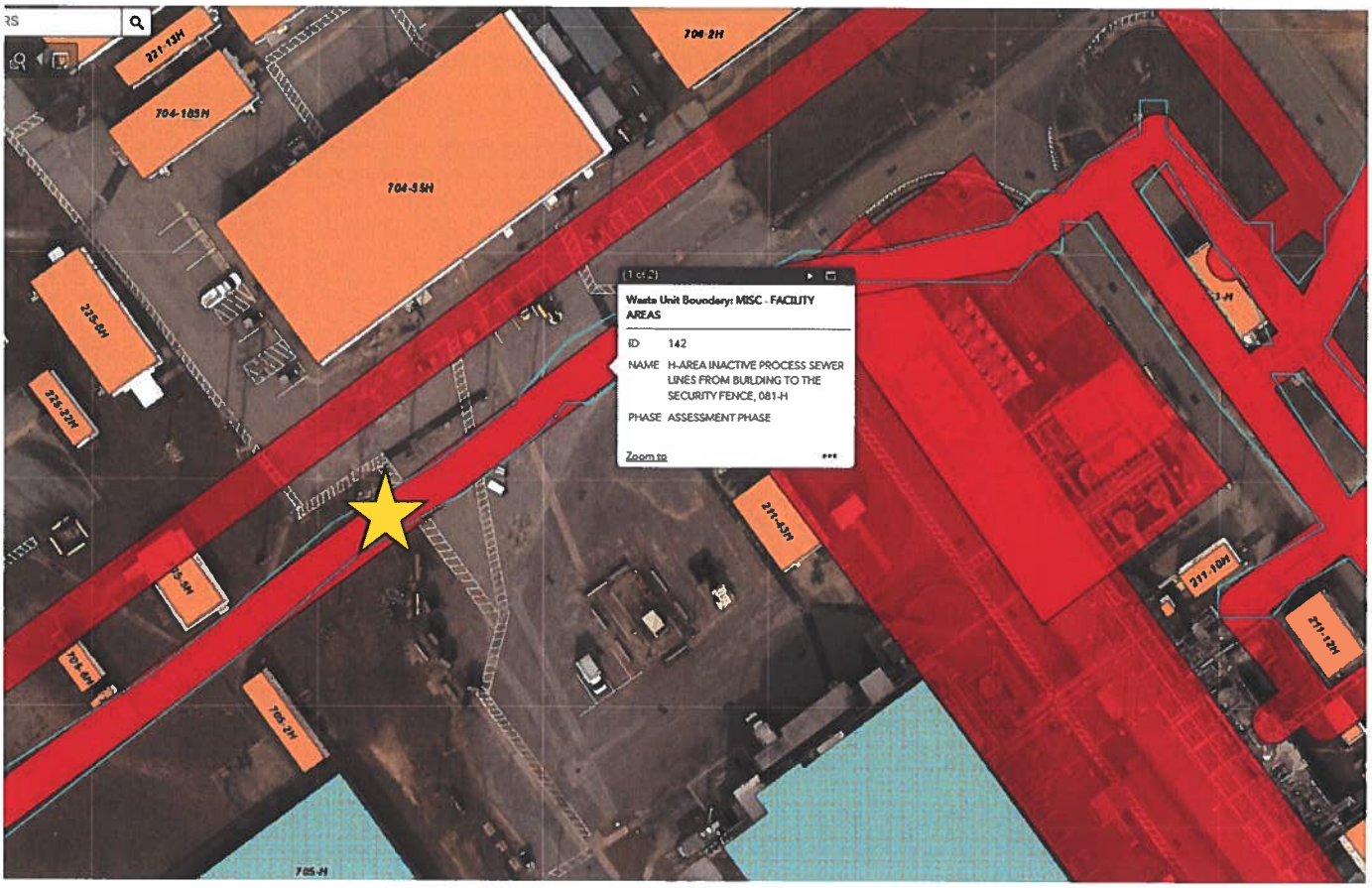
4. C-DCF-H-04699, Rev 3, Repair and Bring P68 Manhole to Grade, February 15, 2023.

5. Manual 3Q, Procedure 12.2, Revision 9, Stormwater Management and Sediment Reduction

ATTACHMENT 1
Drawing Showing Location of Manhole P5
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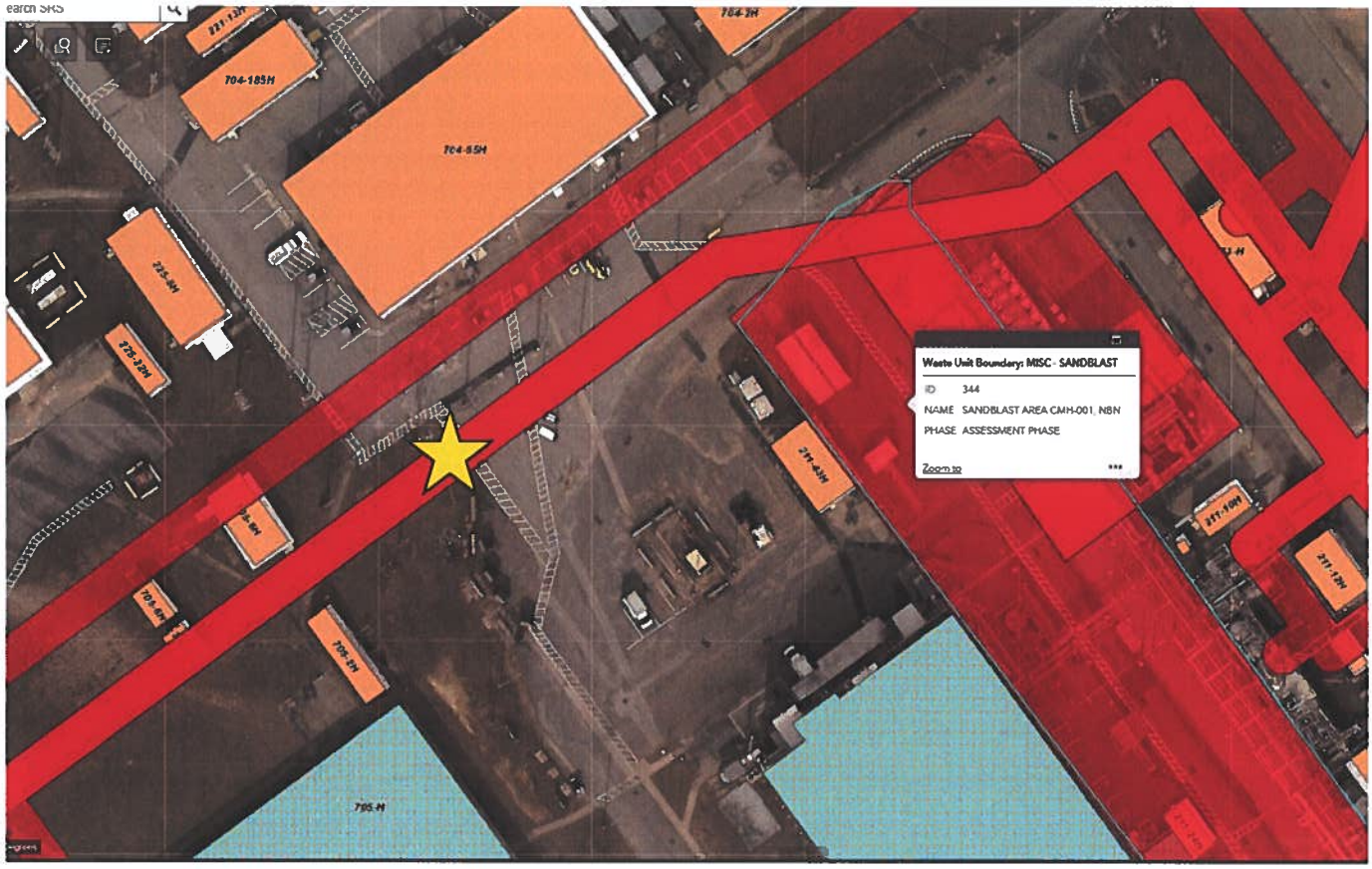
ATTACHMENT 2
Map Showing Portion of Site Index 142, H-Area Inactive Process Sewer Lines from Building to Manhole P-44
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ATTACHMENT 3

Map Showing Portion of Site Index 344, Sandblast Area, CHM-001

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ATTACHMENT 4

Map Showing Portion of Site Index 591, H-Area Process Sewer Lines as Abandoned, NBN

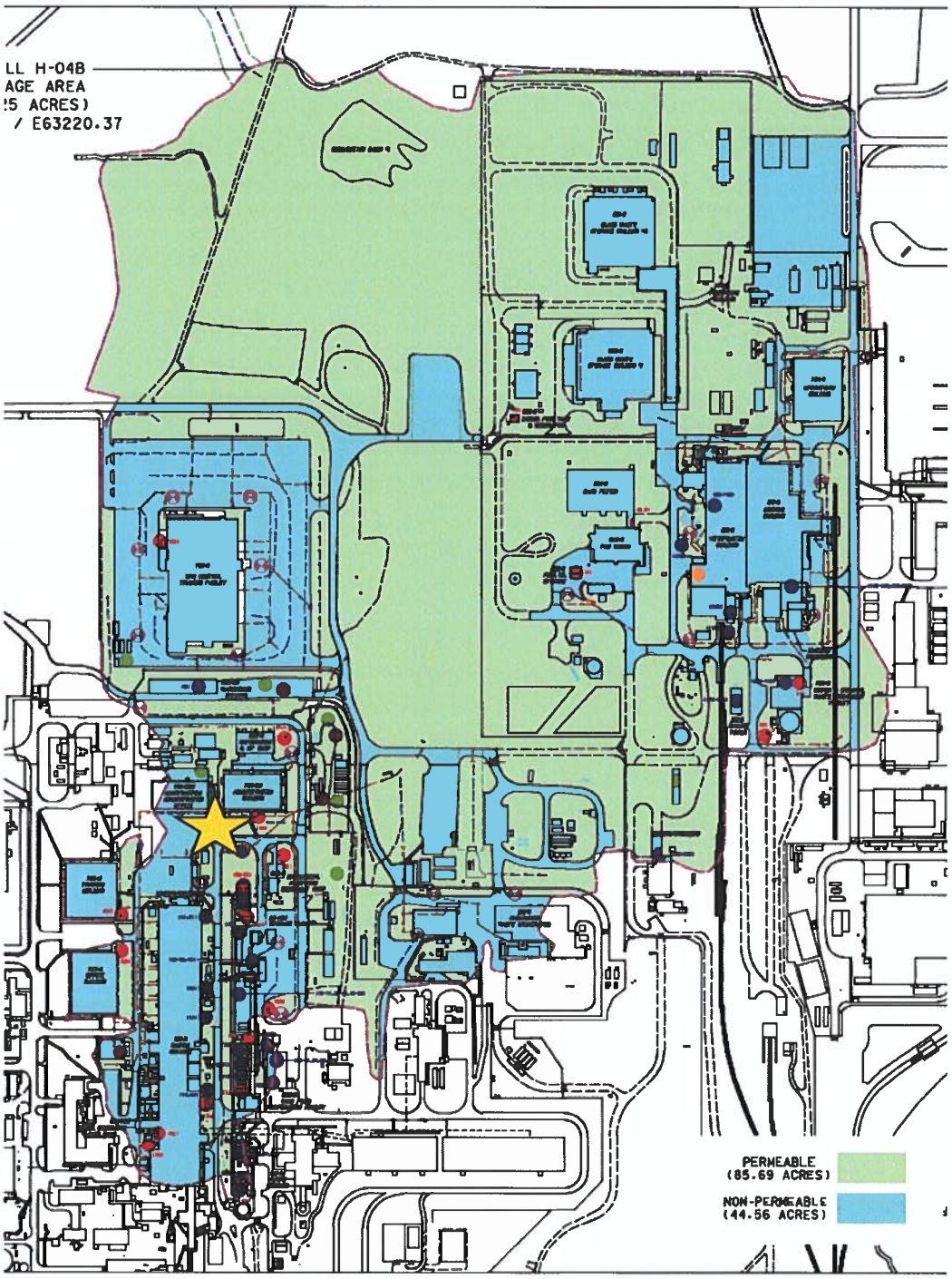
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ATTACHMENT 5

H-04B Outfall Drainage Map with Approximate Location of Manhole P5

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ATTACHMENT 6
Photo Showing Physical Location of Manhole P5
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