SFUND RECORDS CTR
2232718

# Radiological Program Overview

Hunters Point Shipyard

USEPA – James Ricks

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# Historical Information

- Full site radiological history and information presented in Historical Radiological Assessment (HRA)
  - **Finalized in August 2004**
  - **Years of research and archive review**
  - **Radiological Affairs Support Office (RASO) Lead Technical Support**

# HRA Guide to Finding

- Summary Guide prepared at time of HRA release
  - **Context and HRA General Description**
  - **Radiation Source Review**
    - Shipyard activities
    - Gamma Radiography
    - Radiation Detection Instrument Calibration
    - Operation Crossroads
    - Naval Radiological Defense Laboratory

# HRA Impacted Sites Review

882 Sites reviewed for potential use, storage, or disposal of radiological materials

**792 no impact**

**58 require further investigation and/or cleanup**

**26 pending release for unrestricted use**

**4 U.S. Army Corps of Engineers (FUDs)**

**3 released for unrestricted use**



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# HRA Impacted Sites

–Non-radiological work (CERCLA) may be affected if located in impacted area.

– HRA may require substantial time and money to prepare.

– Activities under the Naval Nuclear Propulsion Program (NNPP) contained in Volume I, and Volume II for General Radioactive Materials.

–Identifies potentially radiologically impacted sites.

- An impacted site has had potential for radiological contamination based on use or storage of radiological isotopes or other site historical information.
- Does not mean that site will have contamination, only potential for it.



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# HRA Results

- HRA results (Volume II).
  - **91 impacted sites listed.**
    - Small sites such as former building foundation footprint areas.
    - Large multi-story structures.
    - Fill areas that may contain dials, gauges, deck markers, or sandblast grit (sand blasting was used to decontaminate ship structures).
    - Extensive systems such as the 14 miles of underground storm and sanitary piping systems.



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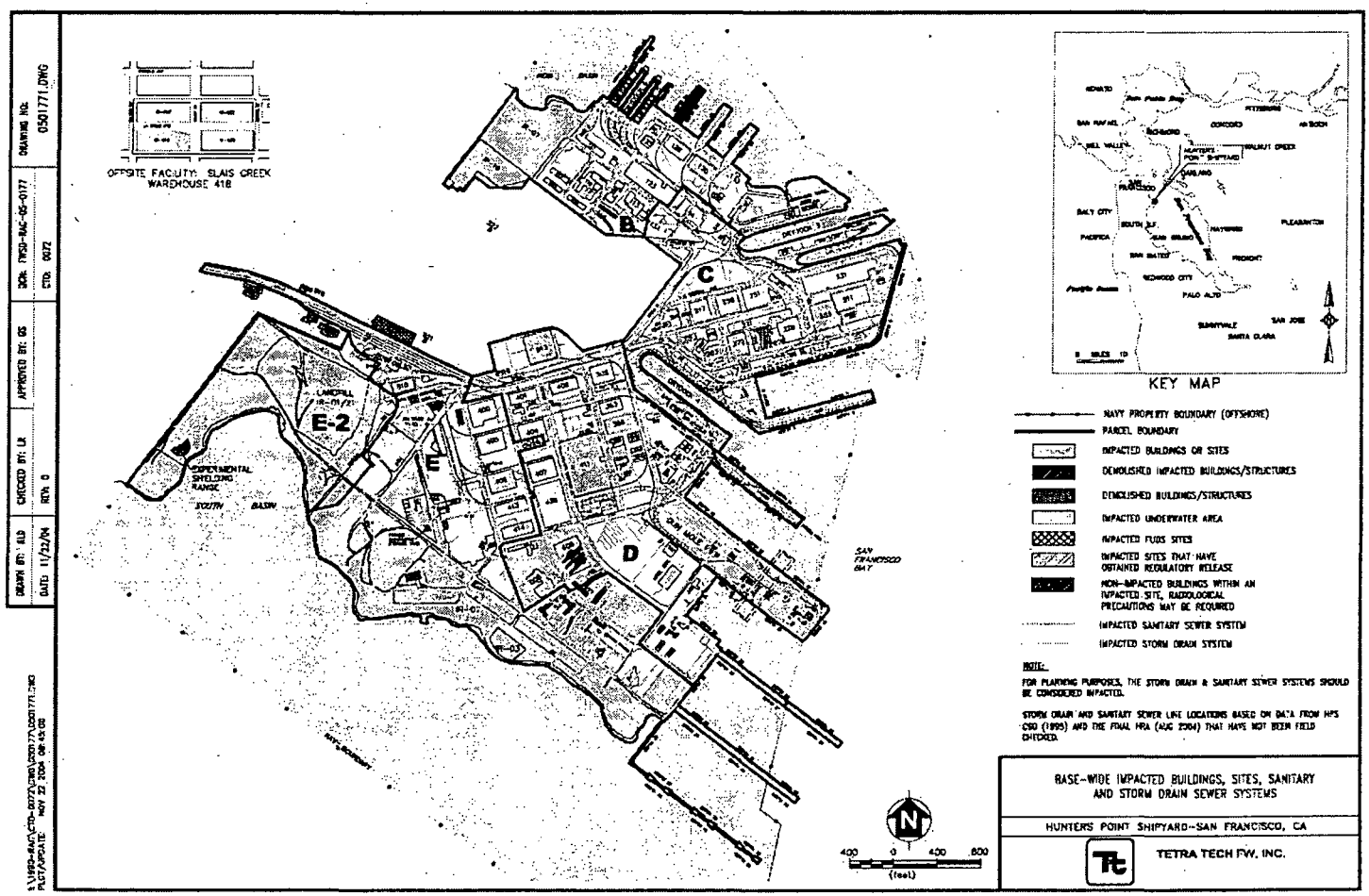
# HRA – Impacted Sites

Base map showing radiologically impacted sites.



# Radiological Clearance Process (Site)

- Scoping Survey
  (Use MARSSIM guidance for surveys, usually Class III survey if contamination is not anticipated)

- Characterization Survey
  (Performed if contamination is found, determine type and extent of contamination, usually a MARSSIM Class I)

- Remediation
  (Performed if contamination found, typical source removal and contamination surveys)

- Final Site Survey (FSS)
  (Initial survey is designed to be used as FSS if no contamination is identified)



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# Radiological Clearance Strategy (Site)

- Prepare radiological survey work plan for each impacted site.
- Conduct field radiological surveys compliant with Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM).
- Delineate and remediate all source areas.
- Conduct final radiological surveys verifying clean-up.
- Prepare Final Status Survey (FSS) report for each site.

# Radiological Clearance Strategy (Site)

- Obtain regulatory sign-off on FSS.
  - **USEPA (open land areas, risk-based).**
  - **Cal. DHS (structures and open areas via DTSC, dose-based).**
- For HPS, prepared a base-wide radiological action memorandum to support the ROD.
- Ideal situation will allow for removal and survey of all areas for free release.
  - **Some circumstances may require alternative negotiations due to difficulties in achieving a free release.**

# Radiological Clearance Process (Parcel)

- All impacted sites/buildings require regulatory approval of Final Site Survey (FSS) Approval
  - Buildings/Structures FSS are typically reviewed/approved by Cal DHS
  - Open space FSS (locations of former buildings) are typically reviewed/approved by USEPA
- Parcel Radiological Completion Report is prepared for parcel, ideally prior to the ROD



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# Radiological Survey Planning

## (1 year Look Ahead)

- Survey Focus on Parcel B & D
  - **Next Parcels scheduled for transfer**
  - **Timing will be tight**
- TCRA's
  - **Metal Reef and Metal Slag**
  - **IR-02 Northwest and Central**
  - **PCB hotspots removal**
    - Not radiologically driven
    - In Impacted area

# Parcel B Overview

- 14 Parcel B sites listed in HRA
  - 8 buildings
  - 3 open space sites
  - 3 dry docks
    - water parts of dry docks 5,6,7 will be grouped with Parcel F sites
- Base-wide sites included on parcel
  - Sanitary sewer piping
  - Storm water piping
  - Ships' berths
    - water parts will be grouped with Parcel F sites



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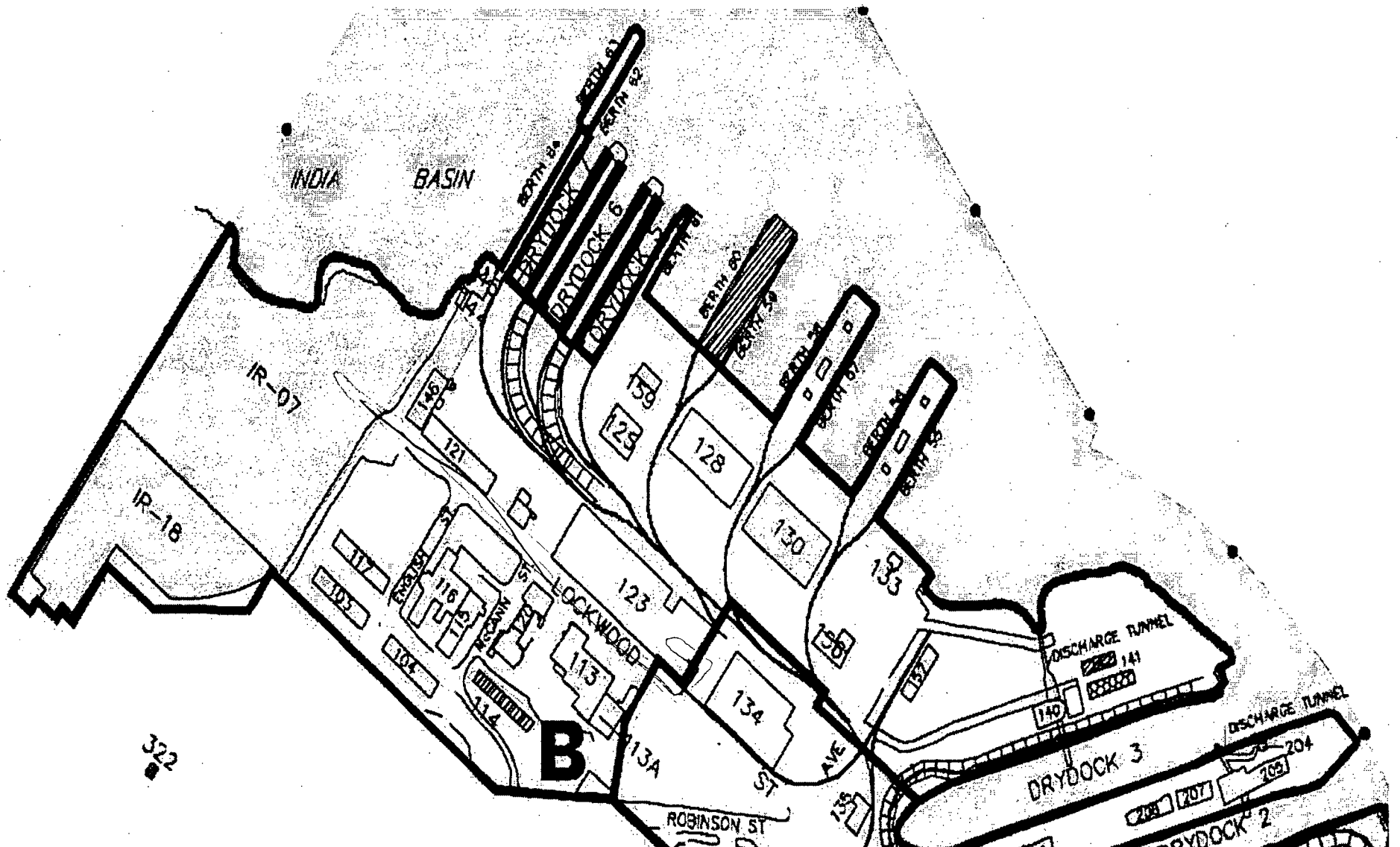
# Parcel B Impacted Sites Map



# Parcel B Radiological Surveys FY05

Phase V

BASEWIDE RADIOLOGICAL SURVEY PLAN

Scoping Survey saved 146 more detailed

- 4 sites already surveyed; reports to be prepared in FY05:
  - Bldg. 103
  - Bldg. 113
  - Bldg. 113A
  - Bldg. 130
- Partial surveys
  - Dry dock 6 (did not include pump system)
  - Building 146 (class III done, more information found; class 1 planned)

and 114

# Parcel B Radiological Surveys FY05

- 10 sites scheduled for survey and reporting in FY05:
  - Bldg. 114 site
  - Bldg. 140 & discharge tunnel
  - Bldg. 142
  - Bldg. 146
  - Bldg. 157
  - IR-07
  - IR-18
  - Dry docks 5,6,7



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# Parcel B Radiological Surveys FY05

- Storm/Sanitary Sewers
  - Partial completion of surveys in FY05 and some remediation if necessary
- Ships' Berths
  - Above water portions

# Parcel D Overview

- 19 Parcel D sites listed in HRA
  - 12 buildings
  - 7 open space sites
- Base-wide sites included on parcel
  - Sanitary sewer piping
  - Storm water piping
  - Ships' berths
    - water parts will be grouped with Parcel F sites



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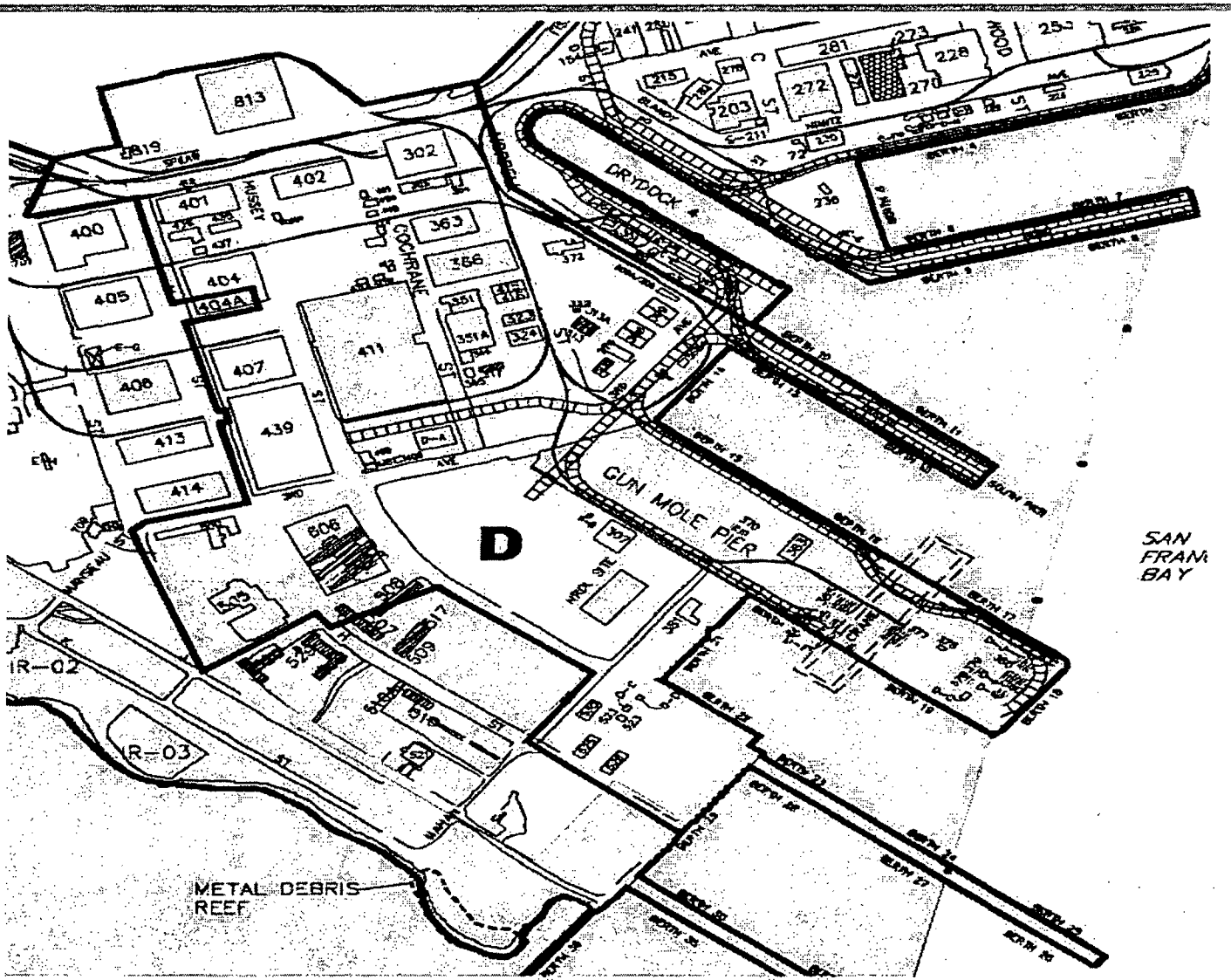
# Parcel D Impacted Sites Map



# Parcel D Radiological Surveys FY05

- 11 sites already surveyed; reports to be prepared in FY05:
  - Bldg. 274
  - Bldg. 313 site
  - Bldg. 313A site
  - Bldg. 317 site
  - Bldg. 322 site
  - Bldg. 351
  - Bldg. 365
  - Bldg. 383 area
  - Bldg. 411
  - former NRDL site (Mahan St)
  - Bldg. 819

# Parcel D Radiological Surveys FY05

- 2 sites scheduled for remediation and reporting in FY05:
  - Bldg. 351A (contamination already remediated in piping and crawlspace; remediation will be performed on outside back steps in FY05)
  - Bldg. 364 (contamination already remediated on Bldg. Surfaces, piping in crawlspace; Room 107 remediation and final site survey to be performed in FY05)



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# Parcel D Radiological Surveys FY05

- Work delayed at 2 sites due to access issues
  - Bldg. 366 remediation (artist relocation issue)
  - Bldg. 503 site (a.k.a radioactive laundry bldg. site, below current Bldg. 606, SFPD)



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# Parcel D Radiological Surveys FY05

- 4 sites scheduled for survey and reporting
  - Bldg. 408
  - Bldg. 500 – Parcel E (NROL STORAGE)
  - Bldg. 813
  - gun mole pier (characterization survey only FY05, report to follow)

# Parcel D Radiological Surveys FY05

- Storm/Sanitary Sewers
  - Partial completion of surveys and some remediation in FY05
- Ships' Berths
  - Above water portions



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# Additional Notes and Qualifiers

- A base-wide work plan describes the approach being followed to conduct surveys, characterizations, remediations, and final site survey reports

- Majority of work sites are conducted under the base-wide work plan using a Task Specific Plan (TSP) to detail individual site requirements

- Some sites or areas may require a separate individual work plan due to complexity or special issues (e.g. sewers)

# Additional Notes and Qualifiers

- Listed FY05 work projections are reasonable but aggressive, some projected work may be pushed past the end of FY05

- Work will continue past FY05 to complete all parcel projects (both B & D) and prepare FSS for all impacted sites

- Other survey and remediation work will also occur on other parcels (C & E) during FY05 but primary schedule focus will be parcel B & D

- A FSS report for each impacted site will be submitted for regulatory review/approval

* Final Site Survey



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