FLOODING WALKDOWN REPORT

IN RESPONSE TO THE 50.54(f) INFORMATION REQUEST REGARDING NEAR-TERM TASK FORCE RECOMMENDATION 2.3: FLOODING

for the

FORT CALHOUN STATION
9610 POWER LANE, BLAIR, NE 68008
Facility Operating License No. DPR-40
NRC Docket No. 50-285

Omaha Public Power District

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1. EXECUTIVE SUMMARY

In response to the NRC Request for Information regarding Near Term Task Force (NTTF) Recommendation 2.3, a flooding protection walkdown was conducted at Fort Calhoun Station (FCS) to identify and address plant-specific degraded, nonconforming, or unanalyzed conditions of the plant's flood protection features. The flooding walkdown was conducted between September 14 and October 5, 2012 and included visual inspections of flood protection features and a walk-thru of the applicable flood protection procedure steps. However, during this period access to sixty seven (67) penetrations was restricted due to construction activities or because access to these penetrations requires additional maintenance support or lack of reasonable physical access. Inspections of these barriers will be conducted upon completion of construction activities which will allow access to these barriers, with the exception of three areas which are considered inaccessible. These inspections will be completed by March 31, 2013.

The scope of the flooding walkdown was developed following a detailed review of all relevant current licensing documents. The flooding walkdown scope consisted of the following three main parts:

- The credited flood protection features in the Intake Structure, Auxiliary Building and Containment were inspected.
- An outdoor walkdown was conducted to ensure no topography changes, added structures or security barriers affect site drainage as described in the current licensing basis (CLB).
- The below-grade structures (i.e., basement walls and basement slabs and penetrations through these walls and floors) in the Intake Structure, Auxiliary Building and Containment were inspected. These areas are credited in the CLB to keep groundwater and runoff from local rainfall out of the safety related buildings.

The methodology and acceptance criteria for the evaluation of flood protection features were based on NEI report 12-07 [Rev 0-A], *Guidelines for Performing Verification Walkdowns of Plant Protection Features.*

Visual inspections of walls, floors and penetrations through the walls and floors were conducted to verify there are no observable structural deficiencies that may impact the structure's ability to remain watertight.

The inspections of walls, floors and penetrations confirmed that credited flood barriers are in place and no deficiencies were identified that render these features incapable of performing their intended function. Reasonable simulation of the flood protection procedures was not conducted. In place of the simulations, the data from the installation of new flood barriers in March 2011 and the procedures used for installation of these barriers during the flood of summer 2011 at FCS were used to demonstrate that the FCS procedures that cover implementation of the flood protection strategy can be executed as written. All CRs entered into the CAP have been addressed and are not deficiencies.

Whether conduits from manholes or cable vaults could provide a path for ground water or rain water to enter safety related buildings was considered relative to the walkdown scope. When conduits from manholes/cable vaults are routed to the safety related buildings, water sealed (Flood Protected) penetrations are provided. The walkdown scope included inspections of the external conduit seals. Internal conduit seals could not be visually inspected; however, plant design documentation provides reasonable assurance that the internal seals are installed, and evidence of groundwater/rainwater leakage through

conduits into safety related buildings at FCS was not identified during the walkdowns. Conduits at FCS do not provide a path for ground water or rain water to enter safety related buildings.

As an enhancement, FCS is in the process of installing wireless level measurement devices in manholes containing safety related cables. Installing the new level instrumentation will provide a reliable way to monitor the level of water in the manholes. It will also provide a tool for the plant to observe the pattern of water inleakage into manholes.

Visual inspection of the sluice gates in the Intake structure, which are active flood protection components within the walkdown scope, was not performed because they are located under water. However, these features are acceptable based on the fact that they are used during normal operation and are covered by the station's preventive maintenance program that periodically checks their integrity and function.

Performance of the walkdowns provided confirmation that flood protection features are in place, are in good condition and will perform as credited in the current licensing basis. Minor issues identified were addressed and dispositioned under the CAP program.

A total of 14 CRs were entered into the CAP as a result of this effort. These are described in Table 2 in the Conclusions section of this report. The outcome of the CAP dispositions identified no deficiencies as defined in NEI 12-07.

2. PURPOSE

a. Background

In response to the nuclear fuel damage at the Fukushima-Dai-ichi power plant due to the March 11, 2011 earthquake and subsequent tsunami, the United States Nuclear Regulatory Commission (NRC) established the Near Term Task Force (NTTF) to conduct a systematic review of NRC processes and regulations, and to make recommendations to the Commission for its policy direction. The NTTF issued a set of recommendations that were intended to clarify and strengthen the regulatory framework for protection against natural phenomena.

On March 12, 2012, the NRC issued an information request pursuant to Title 10 of the Code of Federal Regulations, Section 50.54 (f) (10 CFR 50.54(f) or 50.54(f)) (Reference 3), which included the following six (6) enclosures:

- [NTTF] Recommendation 2.1: Seismic
- [NTTF] Recommendation 2.1: Flooding
- [NTTF] Recommendation 2.3: Seismic
- [NTTF] Recommendation 2.3: Flooding
- [NTTF] Recommendation 9.3: EP
- Licensees and Holders of Construction Permits

In Enclosure 4 of Reference 3, the NRC requested that licensees 'perform flood protection walkdowns to identify and address plant-specific degraded, nonconforming, or unanalyzed conditions and cliff-edge effects (through the corrective action program) and verify the adequacy of monitoring and maintenance procedures'. (See note below regarding 'cliff-edge effects'.)

This report provides the information requested in the March 12, 50.54(f) letter; specifically, the information listed under the 'Requested Information' section of Enclosure 4, paragraph 2 ('a' through 'h') (Reference 3). The 'Requested Information' section of Enclosure 4, paragraph 1 ('a' through 'j'), regarding flooding walkdown procedures, was addressed via OPPD's June 8, 2012 (Reference 1), acceptance of the industry walkdown guidance (Reference 2).

Note Regarding Cliff-Edge Effects

Cliff-edge effects were defined by the NTTF Report (Reference 5), which noted that 'the safety consequences of a flooding event may increase sharply with a small increase in the flooding level'. While the NRC used the same term as the NTTF Report in the March 12 50.54(f) information request (Reference 3), the information the NRC expects utilities to obtain during the Recommendation 2.3: Flooding Walkdowns is different. To clarify, the NRC is now differentiating between cliff-edge effects (which are dealt with under Enclosure 2 of Reference 3) and a new term, Available Physical Margin (APM). APM information will be collected during the walkdowns, but will not be reported in the response to Enclosure 4 of Reference 3. The collected APM information will be available for use in developing the response to Enclosure 2 of Reference 3.

b. Site Description

The Fort Calhoun Station (FCS) is located on the west bank of the Missouri River, approximately 19 miles north of Omaha, and 3 miles southeast of Blair. The plant site is bounded on the northeast and southeast by a portion of Blair Bend of the Missouri River. The Corps of Engineers (CoE) maintains river structures to prevent further meandering of the channel within the alluvial flood plain; the structures take the form of pile dikes and bank revetments. There are six dams upstream of the plant site that control the river flow. These structures are listed in the table below in the order from the nearest to the site (Gavins Point) to the most distant (Fort Peck). There are no dams, locks, or similar structures on the Missouri downstream of the plant site.

MISSOURI RIVER DAMS

Name	Location Near	Year of Initial Operation
Gavins Point	Yankton, South Dakota	1956
Fort Randall	Lake Andes, South Dakota	1953
Big Bend	Chamberlain, South Dakota	1964
Oahe	Pierre, South Dakota	1962
Garrison	Bismarck, North Dakota	1956
Fort Peck	Glasgow, Montana	1940

The structures that house safety-related equipment are the Containment, Auxiliary Building and Intake Structure. The site grade elevation is nominally set at 1004.5 feet above main sea level (MSL). The probable maximum flood (PMF) for FCS resulting from maximum rainfall downstream of the Gavins Point dam and an assumed maximum outflow from the Gavins Point dam would produce a peak flood elevation of approximately 1009.3 feet MSL. The failure of Oahe or Fort Randall combined with a probable maximum flood from a storm below Gavins Point Dam would produce a flood peak of about 1013 to 1014 feet MSL (Reference 9).

c. Requested Actions

Per Enclosure 4 of Reference 3, the NRC requests that each licensee confirm use of the industry-developed, NRC-endorsed, flood walkdown procedures or provide a description of plant-specific walkdown procedures. In a letter dated June 8, 2012 (Reference 1), OPPD confirmed that the flooding walkdown procedure (Reference 2), endorsed by the NRC on May 31, 2012, will be used as the basis for the flooding walkdowns.

d. Requested Information

Per Enclosure 4 of Reference 3,

1. The NRC requests that each licensee confirm that it will use the industry-developed, NRC endorsed, flooding walkdown procedures or provide a description of plant-specific walkdown procedures. As indicated previously, OPPD's letter dated June 8, 2012 (Reference 1), confirmed that the flooding walkdown procedure (Reference 2), endorsed by the NRC on May 31, 2012, will be used as the basis for the flooding walkdowns.
2. The NRC requests that each licensee conduct the walkdown and submit a final report which includes the results of the walkdown including key findings and identified degraded, nonconforming, or unanalyzed conditions.

3. METHODOLOGY

a. Overview of NEI 12-07 (Walkdown Guidance)

In a collaborative effort with NRC staff, NEI developed and issued report 12-07 [Rev 0-A], *Guidelines for Performing Verification Walkdowns of Plant Protection Features*, dated May 2012 (Reference 2). The NRC endorsed NEI 12-07 on May 31, 2012 with amendments. NEI 12-07 was updated to incorporate the amendments and re-issued on June 18, 2012. On June 8, 2012, OPPD issued a letter to the NRC (Reference 1) stating that the endorsed flooding walkdown procedure (Reference 2) will be used as the basis for the flooding walkdowns.

b. Application of NEI 12-07

OPPD's approach to the flooding walkdowns included the following three phases:

Phase 1 – Preparation, Training, Data Gathering, and Scoping

OPPD developed and presented a training course for walkdown team members to ensure a complete and consistent implementation of NEI 12-07 guidelines. In addition, all walkdown team members completed the applicable NANTeL training and testing. Data gathering began with identification of station-specific licensing commitments and station design basis relative to external flooding events. This included review of the Fort Calhoun Station Updated Safety Analysis Report (USAR) (Reference 7), identification of drawings showing flood protection features and review of station procedures and calculations relative to external flooding events. A walkdown scope was developed to ensure station features credited as performing a flood protection function in the current licensing basis would be inspected. Based on the walkdown scope a walkdown list (see Attachment A) was prepared identifying the specific features to be inspected. For each feature on the walkdown list a walkdown package was prepared for use by the walkdown team in performing and documenting the walkdown.

The scope developed for the walkdowns at FCS included the following:

- The floors and exterior watertight walls (up to PMF elevation of 1014 feet) of the Auxiliary building and the Intake structure. Scope included inspection of all penetrations and watertight doors in the walls inspected. Interior walls between rooms were not inspected. The Containment building was not included in the inspection scope because the exterior walls and the floor may be credited with leak tightness based on the periodic ILRT testing.
- Whether conduits from manholes or cable vaults could provide a path for ground water or rain water to enter safety related buildings was considered relative to the walkdown scope. When conduits from manholes/cable vaults are routed to the safety related buildings, water sealed (Flood Protected) penetrations are provided. The walkdown scope included inspections of the external conduit seals. Internal conduit seals could not be visually inspected but were confirmed to be installed by reviewing the associated design and construction drawings. Evidence of groundwater/rainwater leakage through conduits into safety related buildings at FCS has not been identified in the past and was not identified during the walkdowns. Conduits at FCS do not provide a path for ground water or rain water to enter safety related buildings.
- An outdoor walkdown to identify topography changes was conducted and documented in the NEI 12-07 Walkdown Record Form. The visual inspection of the site and the review of the grade elevations shown on the most recent site topographic map confirmed that no topography changes, added structures or security barriers affected site drainage as described in the CLB.

Phase 2 – Inspections and Reasonable Simulations

Visual inspection of each feature was performed during the walkdowns and the results were documented on the Walkdown Record Forms. The condition of each feature as observed was compared to the acceptance criteria defined in NEI 12-07. See item 3C below for a discussion of reasonable simulations.

Phase 3 – Final Reporting

The Walkdown Record Forms were completed and assembled into a package that included a list of credited flood protection feature at FCS as shown in Attachment A. Completion of the Walkdown Record Forms was performed in accordance with the guidance provided in Section 7 of NEI 12-07. A Flooding Walkdown Report (this report) was prepared to address the items outlined in the "Requested Information" section of the "Recommendation 2.3: Flooding" enclosure from the 10CFR50.54 (f) letter 07.

c. Reasonable Simulations

The purpose of reasonable simulations is to verify required flood protection procedures or activities can be executed as specified/written.

Fort Calhoun Station flood protection features do include temporary or active features that require implementation of a procedure for performance of manual/operator actions in order for the feature to perform its intended flood protection function. Therefore, procedure walk-through was conducted at Fort Calhoun Station. However, reasonable simulation of the flood protection procedures was not conducted. In place of the simulations the verifications completed as part of the process of installing new flood barriers in March 2011 and the procedures used for installation of the barriers during the flood of summer 2011 at FCS were used to demonstrate that the FCS

procedures that cover implementation of the flood protection strategy can be executed as written. Where degraded, non-conforming or unanalyzed conditions were identified, these findings were documented and entered into the station corrective action program.

d. Walkdown Inspection Guidance

Walkdown inspection guidance from NEI 12-07 (Reference 2) was used for specific features, listed below, as applicable.

- *Incorporated or Exterior Passive Features:*
  - *Site Elevations and Topography*
  - *Earthen Features (i.e., Flood Protection Berm, Dike, Levee)*
  - *Concrete and Steel Structures*
  - *Wall, Ceiling, and Floor Seals (e.g. Penetration Seals, Cork Seals)*
  - *Passive Flood Barriers or Water Diversion Structures*
  - *Drains and Catch Basins*
  - *Plugs and Manhole Covers*
  - *Drainage Pathways (Swales, Subsurface Drainage System, etc.)*
  - *Piping and Cable Vaults and Tunnels, Electrical Cable Conduit*
  - *Floor Hatches*
  - *Flap Gate/Backwater Valve/Duckbill Valve*
  - *Flood Wall*
- *Incorporated or Exterior Active Features:*
  - *Credited Water Tight Doors*
  - *Credited Non-Watertight Doors*
  - *Pumps*
  - *Water Level Indication*
  - *Gate Valves*
- *Temporary Passive Features:*
  - *Portable Flood Barriers and Inflatable Rubber Seals*
  - *Flood Gate*
- *Temporary Active Feature*
  - *Pumps*

The FCS specific flood protection features that were walked down are listed in Attachment A.

4. RESULTS

The information requested in Reference 3, Enclosure 4, under paragraph 2 of the 'Requested Information' section, is provided below. The contents of each item were developed in accordance with Reference 2, Appendix D.

a. Requested Information Item 2(a) – Design Basis Flood Hazards

Describe the design basis flood hazard level(s) for all flood-causing mechanisms, including groundwater ingress.

The Fort Calhoun Station (FCS) design basis for external flooding is described in FCS USAR Sections 2.7 and 9.8 (Reference 7) and PLDBD-CS-56 (Reference 9). FCS is designed to be protected from the effects of river flooding and local rainwater.

The Fort Calhoun Station was licensed in accordance with the draft criteria set forth in the 70 General Design Criteria for Nuclear Power Plant Construction, which were published for comment in the Federal Register (32 FR 10213) on July 11, 1967. Appendix A, Criterion 2 of USAR (Reference 7) defines the FCS design criterion for external flooding. FCS is not committed to later codes and standards related to flooding such as Reg. Guide 1.59, *Design Basis Floods for Nuclear Power Plants*, dated August 1977 or Reg. Guide 1.102. FCS was not analyzed for certain conditions required by later codes and standards.

Per the current licensing basis (CLB), FCS is not analyzed for Probable Maximum Precipitation (PMP) as defined in NEI 12-07. FCS Design Basis includes maximum rainfall (not PMP). Flood time duration is not discussed in the CLB. However, seven (7) days on-site supply requirements are assumed. Per the CLB, hurricane surge and seiche are not applicable to the FCS Design Basis.

During review of the Preliminary Safety Analysis Report (PSAR), the Atomic Energy Commission requested consideration of Probable Maximum Flood (PMF) (without a dam failure) and PMF coincident with a hydrologically induced dam failure. The probable maximum flood (PMF) resulting from maximum rainfall downstream of the Gavins Point dam and an assumed maximum outflow from the Gavins Point dam would produce a peak flood elevation of approximately 1009.3 feet MSL. The failure of Oahe or Fort Randall Dam would require a pyramiding of additional maximum probable conditions beyond those specified. But assuming such a failure and timing it critically with a probable maximum flood from a storm below Gavins Point Dam would produce a flood peak of about 1013 to 1014 feet.

The elevations for the PMFs with and without dam failure did not include wave action. Based upon the current licensing basis, it is a regulatory requirement to protect the plant for external flooding levels less than or equal to 1014 feet, based on a PMF coincident with an Oahe or Fort Randall Dam Failure.

b. Requested Information Item 2(b) – CLB Protection and Mitigation Features

Describe protection and mitigation features that are considered in the licensing basis evaluation to protect against external ingress of water into SSCs important to safety.

Safety related equipment at Fort Calhoun Station that could be impacted by flooding is located in the Containment, Auxiliary Building and Intake Structure. The Containment structure is provided with passive flood protection. The personnel access hatch and equipment hatch penetrations are located such that the lower elevation of the penetrations is at elevation 1011.5 feet. Containment penetrations may be open during plant shutdown modes. Flood barriers installed in the Auxiliary Building provide protection to 1014 feet for Containment and Auxiliary Building mechanical and electrical penetrations below that elevation. The Containment design includes the effect of external hydrostatic loads resulting from a maximum flood level of elevation of 1014 feet (Reference 7, Section 5.4.9).

Permanent passive protection for the Auxiliary Building and Intake Structure is provided to a level of 1007 feet. This passive protection is accomplished by placing openings to portions of these structures containing safety related equipment above 1007 feet. Below 1007 feet, portions of these structures containing safety related equipment are constructed of sealed concrete. These structures were also designed for an external hydrostatic load due to flooding to elevation 1014 feet (Reference 7, Section 5.11).

The railroad siding/truck bay (Room 25) on the west side of the Auxiliary Building is at elevation 1004 feet. However, flooding of the railroad siding would not affect systems or components necessary for plant operation, or for maintenance of safe shutdown for flood elevations to 1007 feet (without additional protection) or 1014 feet with flood barriers installed.

The Auxiliary Building is designed for an external hydrostatic load due to flooding up to elevation 1014 feet. Limited-CQE (Critical Quality Equipment) metal flood barriers are provided for protection of Auxiliary Building openings as needed, for flood levels between 1007 feet and 1014 feet. The design criterion for Auxiliary Building penetrations is that they are capable of sealing against the differential pressure of flood levels up to elevation of 1014 feet. Sandbagging is used inside the Auxiliary Building to control flooding in equipment hatch Room 66. The Safety Injection and Refueling Water Storage Tank (SIRWT) have two goose neck vents in Room 25. The tops of the vents are at approximately 1015 feet, and the hinge points are at approximately 1005 feet. Gaskets are installed at the hinge points to prevent flood water from entering the SIRWT.

The Intake Structure is designed for an external hydrostatic load due to flooding up to elevation 1014 feet. The design criterion for Intake Structure penetrations is that they are capable of sealing against the differential pressure of flood levels up to elevation of 1014 feet. Limited-CQE metal flood barriers are provided for protection of Intake Structure door openings for flood levels between the floor elevation of 1007.5 feet and the licensing basis flood level of 1014 feet.

Direct communication exists between the Intake Structure operating floor and the Circulating Water Pump cells. For cell levels above 1007.5 feet, throttling of the traveling screen sluice gates is performed to prevent flooding of the Intake Structure and Raw Water Pump vault via this path. Sandbagging is also used inside the Intake Structure.

The planned operating strategy for floods greater than the site grade elevation of 1004.5 feet, and less than or equal to 1014 feet, is to place the plant on shutdown cooling. This approach uses the Shutdown Cooling System for decay heat removal, with primary-to-secondary heat removal available for additional margin.

The licensing basis does not discuss flood duration or assumed weather conditions concurrent with flooding. The only parameter that is affected by the duration is the ability to maintain station power by way of a diesel generator. Calculations have shown that power can be provided for 7 days if loads are minimized and only one diesel generator is running. Operations is provided with this guidance in the emergency flood protection procedures. It is assumed, although not stated, that the organization will provide a method for replenishing fuel oil supplies within that 7 day period, if needed.

The flood protection features at FCS are not dependent on weather. In addition, FCS flood protection features are designed to function during any plant mode of operation. The allowance for protection for floods is based on information provided by the Corps of Engineers that it would take approximately two days for a flood crest due to dam failure to travel from the Gavins Point reservoir to the Fort Calhoun plant site. This expected transit time provides sufficient warning time to shut down the plant and implement adequate emergency procedures. There are no time dependent actions required.

c. Requested Information Item 2(c) – Flood Warning Systems

Describe any warning systems to detect the presence of water in rooms important to safety.

FCS has no warning systems in rooms important to safety credited to detect flooding from external sources. During routine operations FCS monitors the Missouri River for conditions which would initiate

flood response actions. Flood response actions and entry conditions into the emergency flood protection procedures are initiated when one or more of the following exist:

- The National Weather Service or the U.S. Army Corps of Engineers forecasts the possibility of river level exceeding 1004 feet.
- River level reaches the 1000 foot level.
- Notification by the U.S. Army Corps of Engineers that an upstream dam or dams have failed with flooding expected in the Fort Calhoun area.

If notified by U.S. Army Corps of Engineers or county/state/federal authorities that an upstream dam or dams have failed or are anticipated to fail with flooding expected to exceed 1004 feet MSL in the Fort Calhoun area, the Emergency Response Plan will be activated immediately to allow for longest lead times to safely shutdown the plant and maintain it in a safe shutdown condition. Based on the information provided by U. S. Army Corps of Engineers, it would take approximately two days for a flood crest due to dam failure to travel from the Gavins Point reservoir to the Fort Calhoun plant site. This expected transit time provides sufficient warning time to shut down the plant and implement adequate emergency procedures (Reference 9).

d. Requested Information Item 2(d) – Flood Protection System/Barrier Effectiveness

Discuss the effectiveness of flood protection systems and exterior, incorporated, and temporary flood barriers. Discuss how these systems and barriers were evaluated using the acceptance criteria developed as part of Requested Information Item 1.h [in Enclosure 4 of the March 12, 2012, 50.54(f) letter]

Section 6 of NEI 12-07 defines 'acceptance' as:

> *"Flood protection features are considered acceptable if no conditions adverse to quality were identified during walkdowns, verification activities, or program reviews as determined by the licensee's Corrective Action Program. Conditions adverse to quality are those that prevent the flood protection feature from performing its credited function during a design basis external flooding event and are 'deficiencies'. Deficiencies must be reported to the NRC in the response to the 50.54(f) letter."*

As indicated in Section 3d, inspection guidance was used as included in NEI 12-07 (Reference 2). All observations that could not be immediately judged as acceptable were entered into the Corrective Action Program (CAP) for evaluation.

The purpose of the walkdowns performed in response to the NRC Request for Information regarding NTTF Recommendation 2.3, is to verify conformance with FCS's current licensing basis. The adequacy of the current licensing basis will be addressed in response to Recommendation 2.1.

Acceptance criteria for visual inspections performed during the walkdowns was used as included in NEI 12-07 (Reference 2) to insure that any conditions adverse to quality were identified. Considerations taken into account when flood protection features were reviewed included the following:

- Flood protection configuration is in accordance with design drawings and the station's current licensing basis.
- Visual inspection did not identify any material degradation. A detailed listing of acceptance criteria for visual inspections based upon NEI 12-07 (Reference 2) was available to the walkdown team during performance of the walkdowns.

- When applicable, PMs or periodic inspections are in place, within their required periodicity, and of adequate scope.
- No topography changes, including security barrier installations, adversely affect the site drainage.

Walkdowns were conducted to verify that flood protection systems and exterior, incorporated, and temporary flood barriers credited for keeping water out of safety-related areas are in good condition. Flood protection features inspected at FCS (see Attachment A) also include flood doors, removable metal barriers providing flood protection for the Auxiliary Building and the Intake structure, and the associated tools and equipment required to install these barriers. An outdoor walkdown to identify topography changes was conducted and documented in the NEI 12-07 Walkdown Record Form. The visual inspection of the site and the review of the grade elevations shown on the site topographic map confirmed that no topography changes, added structures or security barriers affected site drainage as described in the CLB. Whether conduits from manholes or cable vaults could provide a path for ground water or rain water to enter safety related buildings was considered relative to the walkdown scope. When conduits from manholes/cable vaults are routed to the safety related buildings, water sealed (Flood Protected) penetrations are provided. In a few cases there are entering conduits that turn up and terminate above grade level such that no path for water is provided. The walkdown scope included inspections of the external conduit seals. Internal conduit seals could not be visually inspected but are provided by design. Evidence of groundwater/rainwater leakage through conduits into safety related buildings at FCS was not identified during the walkdowns. Conduits at FCS do not provide a path for ground water or rain water to enter safety related buildings.

The walkdowns, procedure walk-through and document reviews verify that flood protection features incorporated in the FCS design provide effective barriers for keeping external flooding from reaching safety-related systems and equipment. The walkdowns, procedure walk-through, and document reviews did, however, result in some observations that were entered into the corrective action program (CAP) for disposition.

e. Requested Information Item 2(e) – Implementation of Walkdown Process

Present information related to the implementation of the walkdown process (e.g., details of selection of the walkdown team and procedures) using the documentation template discussed in Requested Information Item 1.j [in Enclosure 4 of the March 12, 2012, 50.54(f) letter], including actions taken in response to the peer review.

Station walkdowns were implemented in accordance with the guidelines provided in NEI 12-07 (Reference 2). The FCS walkdown team included four Sargent & Lundy employees as well as one FCS Operator and the FCS Lead Responsible Engineer for flooding issues. All team members are familiar with the station licensing basis relative to external flooding, were badged at FCS and completed both NANTeL based training and OPPD's specific training on implementation of the walkdowns in accordance with NEI 12-07 guidelines. The Sargent & Lundy team consisted of four engineering and design support personnel (Mechanical/Structural/Electrical) familiar with Fort Calhoun Station. At least two team members performed all visual inspections. Walkdown results were documented using the NEI 12-07 recommended form. Walkdown packages, one for each flooding feature, where prepared in advance and included the NEI 12-07 walkdown form with Parts A and B already completed as well as reference drawings and documentation. The remaining parts of the walkdown forms were finalized after the

feature walkdown was completed, and the identification of any item requiring further action was entered into corrective action program (CAP).

f. Requested Information Item 2(f) – Findings and Corrective Actions Taken/Planned

Results of the walkdown including key findings and identified degraded, non-conforming, or unanalyzed conditions. Include a detailed description of the actions taken or planned to address these conditions using the guidance in Regulatory Issues Summary 2005-20, Rev 1, Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operability Conditions Adverse to Quality or Safety," including entering the condition in the corrective action program.

The walkdown scope was developed to confirm that flood protection features credited in the current licensing basis are acceptable and capable of performing their credited flood protection functions. For Fort Calhoun Station (FCS) the scope primarily consisted of visual inspections of flood protection systems and exterior, incorporated, and temporary flood barriers. In addition, an outdoor walkdown was conducted to confirm surface drainage provisions have not been impacted by changes to topography, such as might result from installation of new security barriers. Inspections of credited walkdown features were performed by the walkdown team following the guidance provided in NEI 12-07 and were documented in walkdown packages using the NEI 12-07 walkdown forms. Walkdown record forms are retained onsite in accordance with plant procedures. Where degraded, non-conforming or unanalyzed conditions were identified, these findings were documented and entered into the station corrective action program (CAP).

The inspections of flood protection features verified that credited flood barriers are in place and no deficiencies were identified that render these features incapable of performing their intended flood protection function. However, some CRs noting identified discrepancies were generated and entered into the CAP. These have been addressed and are not deficiencies as defined in NEI 12-07. None of the issues identified during the walkdowns and documented in the CRs resulted in an operability concern.

A total of 14 CRs were generated in the process of performing the walkdowns. These are listed in Table 2.

Observations Not Immediately Judged As Acceptable

Several CRs were generated to document some of the wall cracks and stains and signs of past water leakage observed during the walkdown. These CRs are listed in Table 2.

Observations Designated through CAP as Deficient

None.

Observations Not Evaluated for Deficiencies in CAP

None.

Restricted Access Area

During this walkdown access to sixty four (64) flooding features (penetrations and walls) was restricted due to ongoing construction activities, or because access to these penetrations requires additional maintenance support. Approximately 38 of these penetrations (associated with Manhole 31) are being modified per EC 54662 to install upgraded conduit supports and new conduit seals to protect equipment from water intrusion from Manhole 31 via conduits. The remaining penetrations and walls are located in the Intake Structure and Auxiliary Building.

Inspections of these barriers will be conducted upon availability of required maintenance support and completion of construction activities which will allow access to these barriers. These inspections will be completed by March 31, 2013.

Inaccessible Area

The exterior Auxiliary Building concrete wall in Room 27 is covered by a metal plate and is inaccessible. There is reasonable assurance that the feature is available and will perform the external flood protection for the full duration of the flood condition based on inspection of accessible areas of the exterior Auxiliary Building concrete wall. No signs of water leakage at the bottom of the plate where it mated up with the floor were observed in this room during the 2011 flood.

The exterior Auxiliary Building concrete wall in Room 8 and 17 is inaccessible due no reasonable means of physical access to these rooms. These rooms are not surveyed and the radiation level in the rooms is unknown. There is reasonable assurance that this feature is also available and will perform the external flood protection for the full duration of the flood condition based on inspection of accessible areas of the exterior Auxiliary Building concrete wall and that no leakage of water was observed from these rooms during the 2011 flood.

g. Requested Information Item 2(g) – Cliff –Edge Effects and Available Physical Margin

Document any cliff-edge effects identified and the associated basis. Indicate those that were entered into the corrective action program. Also include a detailed description of the actions taken or planned to address these effects.

Cliff-edge effects were defined in the NTTF Report (Reference 5) as "the safety consequences of a flooding event may increase sharply with a small increase in the flooding level". As indicated in Section 3.12 of NEI 12-07 (Reference 2), the NRC is no longer expecting the Recommendation 2.3: Flooding Walkdowns to include an evaluation of cliff-edge effects. The NRC is now differentiating between cliff-edge effects, which are addressed in Enclosure 2 of Reference 3, and Available Physical Margin (APM).

As indicated in Section 3.13 of NEI 12-07 (Reference 2), APM describes the flood margin available for applicable flood protection features at a site (not all flood protection features have APMs). The APM for each applicable flood protection feature is the difference between licensing basis flood height and the flood height at which water could affect an SSC important to safety.

APM information was collected by OPPD to primarily support the response to Enclosure 2 of Reference 3 and, as such, is not included in this report. APM determinations did not involve calculating cliff-edge effects (i.e. the safety consequences). During the Integrated Assessment (see Enclosure 2 of Reference 3), the cliff-edge effects and the associated safety risks will be evaluated using the APMs and other information, such as the specific SSCs that are subjected to flooding and the potential availability of other systems to mitigate the risk. Furthermore, observations of 'small margin and significant consequences' were entered into the CAP for further evaluation.

h. Requested Information Item 2(h) – Planned/Newly-Installed Flood Protection Enhancements

Describe any other planned or newly installed flood protection systems or flood mitigation measures including flood barriers that further enhance the flood protection. Identify results and any subsequent actions taken in response to the peer review.

To further enhance FCS's flood protection program, OPPD has written CR 2012-16901 to develop and implement a procedure for periodic surveillance/maintenance of flood protection penetrations that are not already covered by such a program. The flood protection penetrations that also serve as fire protection barriers are already covered by the station's surveillance test program.

FCS is also in the process of installing wireless level measurement devices in manholes containing safety related cables. Installing the new level instrumentation will provide a reliable way to monitor the level of water in the manholes. It will also provide a tool for the plant to observe the pattern of water inleakage into manholes.

EC 55394 proposes to revise AOP-01 to provide Raw Water Pump intake cell level control during flooding conditions from (current) five sluice gates closed with the sixth sluice gate pre-positioned with a small opening to (new) all sluice gates closed and control level by operating 4 manual valves. The proposed configuration allows for better adjustment of flow and control of the intake cell level throughout the duration of the flood because the new valves are accessible from inside the intake structure, thus ensuring that the Raw Water Pumps remain available during a flood.

5. CONCLUSIONS

Inspections of flood protection features identified no deficiencies that would render these features incapable of performing their intended function. All CRs entered into the CAP have been evaluated and there are no deficiencies. A reasonable simulation was not conducted. In place of the simulations the verifications completed as part of the process of installing new flood barriers in March 2011 and the barrier installation during the flood of summer 2011 at FCS were used to demonstrate that the applicable FCS flood protection procedure can be performed successfully. No other changes were determined necessary as a result of the flood walkdowns at FCS.

Visual inspection of the sluice gates in the Intake structure, which are active flood protection components within the walkdown scope, was not performed because they are located under water. However, these features are acceptable based on the fact that they are used during normal operation and are covered by the station's preventive maintenance program that periodically checks their integrity and function.

No operability issues were identified and no degraded, non-conforming or unanalyzed conditions require performance of additional actions.

Table 1 provides a summary of the number and type of features included in the walkdown scope.

Table 2 provides the list of the CRs generated and entered into the station corrective action program (CAP) as a result of the walkdown. None of these CRs resulted in an operability concern and none are reportable deficiencies.

Table 1: Features Included in the Walkdown Scope

Type	# of Visual Inspections	# of Simple Simulations	# of Complex Simulations	# of Drills or Exercises
Incorporated/Exterior Passive	388	0	0	0
Incorporated/Exterior Active	14	0	0	0
Temporary Passive	20	0	0	0
Procedure Walk Through	3	0	0	0
Temporary Active	0	0	0	0
Totals	425	0	0	0

Table 2: CRs Generated in CAP

CR Number	Description
2012-14265	During NRC Inspection of Near Term Task Force Recommendation 2.3 Flooding Walkdowns conducted per TI 2515/187, the NRC inspector asked for the reason why the Intake Structure Sluice gates CW-14A/B/C/D/E/F were not included in the scope FCS flooding walkdown per NEI 12-07. In response to this question, the flood barriers included in the scope were reviewed and it was determined that the sluice gates should have been included in the scope and evaluated per NEI 12-07.
2012-15194	Flooding walkdowns conducted per Fukushima NTTF 2.3 and NEI 12-07 state that "components with an active function can be assumed to function properly if included in a routine PM or surveillance program and the testing is performed under the program is acceptable". VD-681 and VD-682 were installed under EC 50514 and they serve to prevent flooding of the switchgear rooms during a design basis flood. The valves are not included in the preventive maintenance program, thus their operation during a flood cannot be assured. The valves are cycled on a quarterly basis as part of the Fire Protection drain valve flush procedure, OP-PM-FP-1000.
2012-14579	While performing flooding walkdowns for the NTTF 2.3 in the Auxiliary Building, contract engineers found cracking in excess of 0.04" on the South wall adjacent to the SIRWT. While this wall is not an exterior wall and is not subject to exterior flooding inspection per NEI 12-07, this is a condition that may require additional engineering evaluation.
2012-14595	While performing flooding walkdowns for the NTTF 2.3 in the Auxiliary Building, contract engineers found cracking in excess of 0.04" on the South wall. This wall is an exterior wall and is subject to exterior flooding inspection per NEI 12-07, thus this is a condition that requires additional engineering evaluation to determine if the wall can perform its design basis function.
2012-14787	While performing flooding walkdowns for the NTTF 2.3 in Room 25 of the Auxiliary Building, contract engineers found a vent line off the SIRWT which has a flanged connection. The flanged connection is right above fire barrier 25-F-2 and is below the flood level during a design basis flood. Although the flange has a rubber gasket, there is no documentation that it is capable of providing a tight enough connection to prevent flood water leakage into the SIRWT. This connection needs to be evaluated and determine if it is an adequate flood penetration.

CR Number	Description
2012-14809	While performing flooding walkdowns for the Fukushima NTTF 2.3, contract engineers observed stains and signs of past leakage around the drain line coming from the Railroad Bay/Room 25 into Room 24A. During a design basis flood, the drain line is isolated at the downstream valve WD-250, thus water will back up and leak if drain is not tight.
2012-14256	While performing flooding walkdowns for the NTTF 2.3 in Room 19 of Auxiliary Building, contract engineers observed stains and rust around flood penetration 19-N-01, on the North wall, which may be indicative of past leakage around the penetration.
2012-14267	While performing flooding walkdowns for the NTTF 2.3 in the Intake Structure, contract engineers found cracking in excess of 0.04" on the West wall. Evaluation of the capability of this structure to perform its design basis function is required.
2012-14278	While performing flooding walkdowns for the NTTF 2.3 in the Auxiliary Building, contract engineers found cracking in excess of 0.04" on and around a plugged penetration on the west wall of Corridor 4. Evaluation of the capability of this flooding barrier to perform its design basis function is required. Photos of the observed cracks are attached for reference. Leakage from this wall was also identified during the 2011 Flood under CR 2011-5605, but no resolution of the issue can be found.
2012-16874	Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features conducted (NEI 12-07) states that "components with an active function can be assumed to function properly if included in a routine PM or surveillance program and the testing is performed under the program is acceptable". SD-127 and SD-128 were installed under EC 52290. WD-1303 was installed under EC 52184. Both ECs were developed in response to the 2011 FCS flooding and the valves serve as flood barriers. The ECs require that a PM be developed to inspect and cycle the valves every 5 years, however the ECs are not closed and new PMs are not prepared and made active. The CR is written to document the findings of the flooding walkdowns and to ensure that the PMs are developed and implemented as required by the ECs to satisfy the requirements of NEI 12-07.
2012-16884	Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features (NEI 12-07) states that "components with an active function can be assumed to function properly if included in a routine PM or surveillance program and the testing is performed under the program is acceptable". WD-250 is a normally locked open valve for the Railroad Area Sump Isolation. The valve is designated as a Flood Hazard component and AOP-1 requires that it be closed in case of a flood. There are no PMs associated with this valve that would ensure its functionality. The CR is written to document the findings of the flooding walkdowns and to ensure that a PM is developed and implemented as required by NEI 12-07.
2012-16891	Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features (NEI 12-07)states that components with an active function can be assumed to function properly if included in a routine PM or surveillance program and the testing is performed under the program is acceptable". WD-1216, WD-1217, WD-1218 and WD-1219 are Radwaste building Sump pump isolation valves designated as a Flood Hazard components and AOP-1 requires that they be closed in case of a flood. There are no PMs associated with these valves to ensure their functionality. The CR is written to document the findings of the flooding walkdowns and to ensure that a PM is developed and implemented as required by NEI 12-07.
2012-16901	As a result of the NRC required Flooding Walkdown performed by OPPD, it was determined that some flood protection features are not included in a periodic test, monitoring or inspection program to ensure that their functionality is adequately maintained. Specifically, the flood protection penetrations that do not serve as a fire barrier are not covered by such a program. In accordance with the NRC endorsed NEI 12-07, Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features, these flood protection penetrations are to be included in a periodic test, monitoring or inspection program to ensure that their functionality is adequately maintained. These flood protection penetrations are listed in the attachment.
2012-17040	Approximately a 2' long crack was found on the floor (greater than .04) at El. 993'-6". A crater in the slab the size of approximately 2" to 3" in diameter and about 1" deep with loose aggregate inside is located on the floor at El. 974'-8" between Column Row 103 & 104 along Col. Row AA, 13' north of column row 103 and 6' to 7' east of the west wall. Gaps between the floor slab & the bottom of the wall observed around the 3 sides (east, south & west sides) of the room in several places. This CR is written per the requirements of NEI-12-07 acceptance criteria, which states that cracks in excess of 0.04"require evaluation.

6. REFERENCES

1. Omaha Public Power District Letter No.: LIC-12-0078, dated June 8, 2012 to U.S. Nuclear Regulatory Commission, "OPPD 90-Day Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendations 2.1 and 2.3 (Flooding), of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident"
2. Nuclear Energy Institute (NEI), Report 12-07 [Rev 0-A]. *Guidelines for Performing Verification Walkdowns of Plant Protection Features*. May 2012 [NRC endorsed May 31, 2012; updated and re-issued June 18, 2012].
3. Letter from NRC (E. J. Leeds & M. R. Johnson) to OPPD (D. J. Bannister), "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident," dated March 12, 2012 (ML 12053A340) (NRC-12-0021)
4. Letter from NRC (E. J. Leeds) to OPPD (D. J. Bannister), "Prioritization of Response Due Dates For Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated May 11,2012 (ML2097A509) (NRC-12-0048)
5. U.S. Nuclear Regulatory Commission. *Recommendations for Enhancing Reactor Safety in the 21st Century, The Near Term Task Force Review of Insights from the Fukushima Dai-ichi Accident*. July 12, 2011.
6. U.S. Nuclear Regulatory Commission. *Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety*. NRC Inspection Manual. Part 9900: Technical Guidance. Regulatory Issues Summary 2005-20, Revisions 1. September 26, 2005
7. Fort Calhoun Station USAR
8. Letter from NRC (D. L. Skeen) to NEI (A. P. Heymer), "Endorsement of Nuclear Energy Institute (NEI) 12-07, *Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features,*" dated May 31,2012 (ML12144A142)
9. PLDBD-CS-56 – External Flooding, Rev. 1

7. ATTACHMENTS

A. Flood Protection Features List, Fort Calhoun Station, dated 11/21/2012

Fort Calhoun Station

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
1	04-W-01	Abandoned FP penetration-Grouted	Aux Bldg	998'-4"	4 - Basement Aux Building Control Area	Abandon FP penetration-Grouted	Incorporated or Exterior Passive (IEP)	1014 ft
2	0971-02	Water Tight Door to Stressing Gallary	Aux Bldg	971'-0"	22 - East SI Pump Room	Water Tight Door to Stressing Gallary	Incorporated or Exterior Active (IEA)	1014 ft
3	1013-04	Access Door from DG Rooms to Equipment Hatch Room	Aux Bldg	1013'	65 - Diesel Vent Room	Access Door from DG Rooms to Equipment Hatch Room	Temporary Passive (TP)	1014 ft
4	10-N-P7	Chem Lab Drains to Aux Building WD	Aux Bldg	999'-6"	10 - Monitor Tank Room	Chem Lab Drains to Aux Building WD	Incorporated or Exterior Passive (IEP)	1014 ft
5	19-E-01	Penetration	Aux Bldg	1009'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
6	19-E-02	Penetration	Aux Bldg	1009'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
7	19-E-03	Penetration	Aux Bldg	1009'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
8	19-E-04	Penetration	Aux Bldg	1009'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
9	19-E-05	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
10	19-E-06	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
11	19-E-07	Penetration	Aux Bldg	1008'-4"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
12	19-E-08	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
13	19-E-09	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
14	19-E-10	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
15	19-E-11	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
16	19-E-12	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
17	19-E-13	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
18	19-E-14	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
19	19-E-15	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
20	19-E-16	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
21	19-E-17	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
22	19-E-18	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
23	19-E-19	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
24	19-E-20	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
25	19-E-21	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
26	19-E-22	Penetration	Aux Bldg	1008'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
27	19-E-23	Penetration	Aux Bldg	1008'-4"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
28	19-E-24	Penetration	Aux Bldg	1008'-4"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
29	19-E-25	Penetration	Aux Bldg	1008'-4"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
30	19-E-26	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
31	19-E-27	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
32	19-E-28	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
33	19-E-29	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
34	19-E-30	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
35	19-E-31	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
36	19-E-32	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
37	19-E-33	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
38	19-E-34	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
39	19-E-35	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
40	19-E-36	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
41	19-E-37	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
42	19-E-38	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
43	19-E-39	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
44	19-E-40	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
45	19-E-41	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
46	19-E-42	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
47	19-E-43	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
48	19-E-44	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
49	19-E-45	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
50	19-E-46	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
51	19-E-47	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
52	19-E-48	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
53	19-E-49	Penetration	Aux Bldg	1008'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
54	19-E-50	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
55	19-E-51	Penetration	Aux Bldg	1009'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
56	19-E-52	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
57	19-E-53	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
58	19-E-54	Penetration	Aux Bldg	1009'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
59	19-E-55	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
60	19-E-57	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
61	19-E-58	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
62	19-E-59	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
63	19-E-60	Penetration	Aux Bldg	1008'-7"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
64	19-E-61	Penetration	Aux Bldg	1009'-6"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
65	19-E-62	Penetration	Aux Bldg	1008'-7"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
66	19-E-63	Penetration	Aux Bldg	1010'-2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
67	19-E-64	Penetration	Aux Bldg	1009'-6"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
68	19-E-65	Penetration	Aux Bldg	1009'-6"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
69	19-E-66	Penetration	Aux Bldg	1009'-6"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
70	19-E-67	Penetration	Aux Bldg	1008'-8"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
71	19-E-68	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
72	19-E-69	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
73	19-E-70	Penetration	Aux Bldg	1008'-10"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
74	19-N-01	Penetration	Aux Bldg	999'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
75	19-S-59	Abandoned Service Water penetration	Aux Bldg	997'-2"	19 - Air Compressor Room	Abandoned Service Water penetration	Incorporated or Exterior Passive (IEP)	1014 ft
76	19-S-60	Sewer Line	Aux Bldg	997'-2"	19 - Air Compressor Room	Sewer Line	Incorporated or Exterior Passive (IEP)	1014 ft
77	19-S-61	Penetration	Aux Bldg	996'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
78	19-S-62	Penetration	Aux Bldg	996'-0"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
79	19-S-E01	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
80	19-S-E02	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
81	19-S-E03	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
82	19-S-E04	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
83	19-S-E05	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
84	19-S-E07	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
85	19-S-E08	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
86	19-S-E09	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
87	19-S-E10	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
88	19-S-E11	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
89	19-S-E13	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
90	19-S-E14	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
91	19-S-E15	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
92	19-S-E16	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
93	19-S-E17	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
94	19-S-E18	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
95	19-S-E19	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
96	19-S-E20	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
97	19-S-E21	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
98	19-S-E22	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
99	19-S-E23	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
100	19-S-E24	Penetration	Aux Bldg	1008'-10 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
101	19-S-E25	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
102	19-S-E26	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
103	19-S-E27	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
104	19-S-E28	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
105	19-S-E29	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
106	19-S-E30	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
107	19-S-E31	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
108	19-S-E32	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
109	19-S-E34	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
110	19-S-E35	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
111	19-S-E36	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
112	19-S-E37	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
113	19-S-E38	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
114	19-S-E40	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
115	19-S-E41a	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
116	19-S-E41b	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
117	19-S-E42	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
118	19-S-E42a	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
119	19-S-E43	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
120	19-S-E44	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
121	19-S-E45	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
122	19-S-E46	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
123	19-S-E47	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
124	19-S-E48b	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
125	19-S-E49a	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
126	19-S-E49b	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
127	19-S-E50a	Penetration	Aux Bldg	1008'-3 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
128	19-S-E50b	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
129	19-S-E51	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
130	19-S-E52	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
131	19-S-E53b	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
132	19-S-E54	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
133	19-S-E55	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
134	19-S-E56	Penetration	Aux Bldg	1007'-8 1/2"	19 - Air Compressor Room		Incorporated or Exterior Passive (IEP)	1014 ft
135	22-S-01	Penetration	Aux Bldg	983'-3"	22 - East SI Pump Room		Incorporated or Exterior Passive (IEP)	1014 ft
136	24a-S-01	Penetration	Aux Bldg Rm 24a	1001'-0"	2 - SIRWT	Unassigned Capped pipe sleeve	Incorporated or Exterior Passive (IEP)	1014 ft
137	25-F-01	Penetration	Aux Bldg RR Bay	1007'-0"	24 - Fuel Transfer Canal Pump Room	SIRWT Vent Rm 2 to Rm 25	Incorporated or Exterior Passive (IEP)	1014 ft
138	25-F-02	Penetration	Aux Bldg RR Bay	1007'-0"	24 - Fuel Transfer Canal Pump Room	SIRWT Vent Rm 2 to Rm 25	Incorporated or Exterior Passive (IEP)	1014 ft
139	25-F-03	Penetration	Aux Bldg	1007'-0"	Room 25		Incorporated or Exterior Passive (IEP)	1014 ft
140	25-F-04	Penetration	Aux Bldg	1007'-0"	Room 25		Incorporated or Exterior Passive (IEP)	1014 ft
141	26-N-38	Penetration	Aux Bldg	1017'-8"	Room 26	Not a flood penetration	Incorporated or Exterior Passive (IEP)	1014 ft
142	27-W-06	Penetration	Aux Bldg	1007'-0"	27 - Drumming Area	aux building penetration for ATCOR (Sealed)	Incorporated or Exterior Passive (IEP)	1014 ft
143	29-W-01	Penetration	Rad Waste	1012'-9 1/2"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
144	29-W-02	Penetration	Rad Waste	1012'-9 1/2"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
145	29-W-04	Penetration	Rad Waste	1011'-6"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
146	29-W-05	Penetration	Rad Waste	1010'-0"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
147	29-W-06	Penetration	Rad Waste	1010'-0"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
148	29-W-09	Penetration	Rad Waste	1011'-6"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
149	29-W-10	Penetration	Rad Waste	1011'-2"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
150	29-W-11	Penetration	Rad Waste	1011'-2"	29 - VCT Room		Incorporated or Exterior Passive (IEP)	1014 ft
151	56E-S-03	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
152	56E-S-04	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
153	56E-S-05	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
154	56E-S-06	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
155	56E-S-07	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
156	56E-S-08	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
157	56E-S-09	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
158	56E-S-10	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
159	56E-S-11	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
160	56E-S-12	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
161	56E-S-13	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
162	56E-S-14	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
163	56E-S-15	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
164	56E-S-16	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
165	56E-S-17	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
166	56E-S-18	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
167	56E-S-19	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
168	56E-S-20	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
169	56E-S-21	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
170	56E-S-22	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
171	56E-S-23	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
172	56E-S-24	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
173	56E-S-25	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
174	56E-S-26	Penetration	Aux Bldg	1014'-0"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
175	56E-S-27	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
176	56E-S-28	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
177	56E-S-29	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
178	56E-S-30	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
179	56E-S-31	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
180	56E-S-32	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
181	56E-S-33	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
182	56E-S-34	Penetration	Aux Bldg	1013'-5"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
183	56E-S-35	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
184	56E-S-36	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
185	56E-S-37	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
186	56E-S-38	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
187	56E-S-39	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
188	56E-S-40	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
189	56E-S-41	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
190	56E-S-42	Penetration	Aux Bldg	1012'-10"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
191	56E-S-43	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
192	56E-S-44	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
193	56E-S-45	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
194	56E-S-46	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
195	56E-S-47	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
196	56E-S-48	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
197	56E-S-49	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
198	56E-S-50	Penetration	Aux Bldg	1012'-3"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
199	56E-S-51	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
200	56E-S-52	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
201	56E-S-53	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
202	56E-S-54	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
203	56E-S-55	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
204	56E-S-56	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
205	56E-S-57	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
206	56E-S-58	Penetration	Aux Bldg	1011'-8"	56E - Switchgear Room (East)		Incorporated or Exterior Passive (IEP)	1014 ft
207	63-S-01	Penetration	Aux Bldg	1008' 6"	63 - D1 Room		Incorporated or Exterior Passive (IEP)	1014 ft
208	63-S-05	Penetration	Aux Bldg	1007' 6"	63 - D1 Room		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
209	63-S-06	Penetration	Aux Bldg	1007' 8"	63 - D1 Room		Incorporated or Exterior Passive (IEP)	1014 ft
210	63-S-07	Penetration	Aux Bldg	1013'	63 - D1 Room		Incorporated or Exterior Passive (IEP)	1014 ft
211	AC-10A/B/C/D/	Raw Water Pump	IS- Intake Structure	999'-4"	IS - Intake Structure		Incorporated or Exterior Active (IEA)	1014 ft
212	AE-13A	Mechanical Penetration	IS- Intake Structure	1009' 0"	IS - Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
213	AE-13B	Mechanical Penetration	IS- Intake Structure	1009' 0"	IS - Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
214	AE-16 / IS-1	Flood barrier for South west intake structure door (IS-1)	IS- Intake Structure	1007'-6"	IS - Intake Structure		Temporary Passive (TP)	1014 ft
215	AE-17/ IS-2	Flood barrier for South East intake structure door (IS-2)	IS- Intake Structure	1007'-6"	IS - Intake Structure	Flood barrier for South East intake structure door (IS-2)	Temporary Passive (TP)	1014 ft
216	AE-18/ IS-3	Flood barrier for North East intake structure door (IS-3)	IS- Intake Structure	1007'-6"	IS - Intake Structure	Flood barrier for North East intake structure door (IS-3)	Temporary Passive (TP)	1014 ft
217	AE-19 / IS-4	Flood barrier for North West intake structure door (IS-4)	IS- Intake Structure	1004'-6"	IS - Intake Structure		Temporary Passive (TP)	1014 ft
218	AE-20/ IS-5	Flood barrier for intake structure truck dockdoor (IS-5)	IS- Intake Structure	1004'-6"	IS - Intake Structure		Temporary Passive (TP)	1014 ft
219	AE-21/ IS-F-32	Screen Wash Trough Discharge Penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	Screen Wash Trough Discharge Penetration	Temporary Passive (TP)	1014 ft
220	AE-22/ 1007-01A/B	Roll-up Door to Rad Waste Building	Aux Bldg	1007'-0"	26 - Aux Building Main Floor Corridor	Roll-up Door to Rad Waste Building	Temporary Passive (TP)	1014 ft
221	AE-23/ 1007-09	Door From Corridor 26 to Chem Lab	Aux Bldg	1007'	26 - Aux Building Main Floor Corridor	Door From Corridor 26 to Chem Lab	Temporary Passive (TP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
222	AE-24/ 1007-19	Aux Building Access Door	Aux Bldg	1007'	52 - Corridor to Aux Bldg Locker Room	Aux Building Access Door	Temporary Passive (TP)	1014 ft
223	AE-25/ 1011-01	Door To Corridor 53	Aux Bldg	1011'	53 - Corridor to Switchgear Room	Door To Corridor 53	Temporary Passive (TP)	1014 ft
224	AE-26/ 1011-02	East Door to Battery Room	Aux Bldg	1011'	54 - East Battery Room	East Door to Battery Room	Temporary Passive (TP)	1014 ft
225	AE-27/ 1011-03	North East Door to Switchgear Room	Aux Bldg	1011'	56E - Switchgear Room (East)	North East Door to Switchgear Room	Temporary Passive (TP)	1014 ft
226	AE-28/ 1011-04	South East Door to Switchgear Room	Aux Bldg	1011'	56E - Switchgear Room (East)	South East Door to Switchgear Room	Temporary Passive (TP)	1014 ft
227	AE-29/ 1011-11	Equipment Access Door to Room 19	Aux Bldg	1011'	19 - Air Compressor Room	Equipment Access Door to Room 19	Temporary Passive (TP)	1014 ft
228	AE-30/ Corridor 26	Rail Road Siding Access	Aux Bldg	BOT OF DOOR 1007'-0"	Aux Bldg Corridor 26 RR Bay	Rail Road Siding Access	Temporary Passive (TP)	1014 ft
229	CW-14A-F	Traveling Screen Sluice Gates	IS- Intake Structure	974'-0"	Intake Structure		Incorporated or Exterior Active (IEA)	1014 ft
230	IS East Wall	1014'-6 "dn to 1007'-6"along col row AA, 1007' 6" dn to 970'-0"	IS- Intake Structure	1014'-6 "dn to 1007'-6"along col row AA, 1007'-6" dn to 970'-0"	Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
231	IS Floors	1007'-6",993'-6", 974'-6" & 966'-2"	IS- Intake Structure	1007'-6",993'-6", 974'-6" & 966'-2"	Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
232	IS North Wall	1014'-6 "dn to 1007'-6"along col row 106, 105A 1007'-6" dn to 975'-0"	IS- Intake Structure	1014'-6 "dn to 1007'-6"along col row 106, 105A 1007'-6" dn to 975'-0"	Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
233	IS South Wall	1014'-6 "dn to 1004'-6"along col row 101, 1007'-6" dn to 985' south wall col row 102 985' dn to 966'-2"	IS- Intake Structure	1014'-6 "dn to 1004'-6"along col row 101, 1007'-6" dn to 985' south wall col row 102 985' dn to 966'-2"	Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
234	IS West Wall	1014'-6 "dn to 1004'-6"along col row DD, west wall 21'-4 7/8" west of col row DD 1004'-6" dn to 974'-8"	IS- Intake Structure	1014'-6 "dn to 1004'-6"along col row DD, west wall 21'-4 7/8" west of col row DD 1004'-6" dn to 974'-8"	Intake Structure		Incorporated or Exterior Passive (IEP)	1014 ft
235	IS-E-01	120 vac power receptical penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	120 vac power receptical penetration	Incorporated or Exterior Passive (IEP)	1014 ft
236	IS-E-02	120 vac power receptical penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	120 vac power receptical penetration	Incorporated or Exterior Passive (IEP)	1014 ft
237	IS-E-03	CW-17 Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-17 Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
238	IS-E-04	CW-17 Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1003'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-17 Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
239	IS-E-05	CW-14F Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14F Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
240	IS-E-06	CW-14F Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14F Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
241	IS-E-07	CW-14 Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14 Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
242	IS-E-08	CW-14E Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14E Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
243	IS-E-09	CW-14D Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14D Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
244	IS-E-10	CW-14D Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14D Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
245	IS-E-11	CW-14C Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14C Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
246	IS-E-12	CW-14C Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14C Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
247	IS-E-13	CW-14B Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14B Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
248	IS-E-14	CW-14B Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14B Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
249	IS-E-15	CW-14A Conduit Penetration from Control Station to Motor	IS- Intake Structure	1004'-6"	IS - Intake Structure	CW-14A Conduit Penetration from Control Station to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
250	IS-E-16	CW-14A Conduit Penetration Power from Cable Tray to Motor	IS- Intake Structure	1004'-6"	IS-CELL - Intake Structure, Intake Cell Space	CW-14A Conduit Penetration Power from Cable Tray to Motor	Incorporated or Exterior Passive (IEP)	1014 ft
251	IS-E-17	Compressed Air to Veranda Penetration	IS- Intake Structure	1004' 0"	IS - Intake Structure	Compressed Air to Veranda Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
252	IS-E-18	"A" Cell Screen Wash Suction Penetration	IS- Intake Structure	974'-8"	IS-CW - Circulating Water Pump Bay	"A" Cell Screen Wash Suction Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
253	IS-E-19	"B" Cell Screen Wash Suction Penetration	IS- Intake Structure	974'-8"	IS-CW - Circulating Water Pump Bay	"B" Cell Screen Wash Suction Penetration	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
254	IS-E-20	"C" Cell Screen Wash Suction Penetration	IS- Intake Structure	974'-8"	IS-CW - Circulating Water Pump Bay	"C" Cell Screen Wash Suction Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
255	IS-E-21	Surface Sluide Penetration	IS- Intake Structure	988'-6"	IS-CELL - Intake Structure, Intake Cell Space	Surface Sluice Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
256	IS-E-22	IS-2 Security Card Reader Penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	IS-2 Security Card Reader Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
257	IS-E-23	"F" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"F" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
258	IS-E-24	"E" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"E" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
259	IS-E-25	"D" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"D" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
260	IS-E-26	"C" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"C" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
261	IS-E-27	"B" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"B" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
262	IS-E-28	"A" Cell Grid Backwash Penetration	IS- Intake Structure	998'-10"	IS-CELL - Intake Structure, Intake Cell Space	"A" Cell Grid Backwash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
263	IS-E-30	Surface Sluice Air Hoist Power Conduit Penetration	IS- Intake Structure	1003'-6"	IS-CELL - Intake Structure, Intake Cell Space	Surface Sluice Air Hoist Power Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
264	IS-E-31	IS-3 Security Card Reader Penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	IS-3 Security Card Reader Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
265	IS-E-34	Trash Rack Sluice Hoist Cable	IS- Intake Structure	1008'-9"	IS - Intake Structure	Trash Rack Sluice Hoist Cable	Temporary Passive (TP)	1014 ft
266	IS-E-35	Trash Rack Sluice Hoist Control Rod	IS- Intake Structure	1008' 9"	IS - Intake Structure	Trash Rack Sluice Hoist Control Rod	Temporary Passive (TP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
267	IS-E-40	Flood barrier for South East intake structure door (IS-2)	IS- Intake Structure	1007'-6"	IS - Intake Structure	Temporary Flood Barrier	Temporary Passive (TP)	1014 ft
268	IS-E-41	Flood barrier for North East intake structure door (IS-3)	IS- Intake Structure	1007'-6"	IS - Intake Structure	Temporary Flood Barrier	Temporary Passive (TP)	1014 ft
269	IS-E-42	Intake Structure El 974'-8 Ground Wire (South)	IS- Intake Structure	974' 8"	IS-CW - Circulating Water Pump Bay	Intake Structure El 974'-8 Ground Wire (South)	Incorporated or Exterior Passive (IEP)	1014 ft
270	IS-E-43	Intake Structure El 974'-8 Ground Wire (North)	IS- Intake Structure	974' 8"	IS-CW - Circulating Water Pump Bay	Intake Structure El 974'-8 Ground Wire (North)	Incorporated or Exterior Passive (IEP)	1014 ft
271	IS-F-01	FP-1B Relief Valve Return to Cell Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	FP-1B Relief Valve Return to Cell Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
272	IS-F-02	FP-1A Suction Casing Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	FP-1A Suction Casing Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
273	IS-F-03	FP-1A Relief Valve Return to Cell Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	FP-1A Relief Valve Return to Cell Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
274	IS-F-04	FP-1B Suction Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	FP-1B Suction Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
275	IS-F-20	"A" Raw Water Pump Penetration	IS- Intake Structure	993'-6"	IS - Intake Structure	"A" Raw Water Pump Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
276	IS-F-21	"B" Raw Water Pump Penetration	IS- Intake Structure	993'-6"	IS - Intake Structure	"B" Raw Water Pump Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
277	IS-F-22	"C" Raw Water Pump Penetration	IS- Intake Structure	993'-6"	IS - Intake Structure	"C" Raw Water Pump Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
278	IS-F-23	"D" Raw Water Pump Penetration	IS- Intake Structure	993'-6"	IS - Intake Structure	"D" Raw Water Pump Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
279	IS-F-25	B-C Cell Cross Connect Gate Operator Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	B-C Cell Cross Connect Gate Operator Penetration	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
280	IS-F-26	A-B Cell Cross Connect Gate Operator Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	A-B Cell Cross Connect Gate Operator Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
281	IS-F-27	"C" Circulating Pump Suction Gate Operator Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	"C" Circulating Pump Suction Gate Operator Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
282	IS-F-28	"B" Circulating Pump Suction Gate Operator Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	"B" Circulating Pump Suction Gate Operator Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
283	IS-F-29	"A" Circulating Pump Suction Gate Operator Penetration	IS- Intake Structure	993' 6"	IS-RW - Raw Water Pump Bay	"A" Circulating Pump Suction Gate Operator Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
284	IS-F-33	"A" Raw Water Strainer Back Wash Penetration	IS- Intake Structure	993'-6"	IS-RW - Raw Water Pump Bay	"A" Raw Water Strainer Back Wash Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
285	IS-F-34	"B" Raw Water Strainer Back Wash Discharge Penetration	IS- Intake Structure	993'-6"	IS-RW - Raw Water Pump Bay	"B" Raw Water Strainer Back Wash Discharge Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
286	IS-F-35	River Level Bubbler Tubing Penetration	IS- Intake Structure	1007'-3"	IS - Intake Structure	River Level Bubbler Tubing Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
287	IS-N-02	Service Water Supply Pipe Penetration	IS- Intake Structure	997'-0"	IS-CW - Circulating Water Pump Bay	Service Water Supply Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
288	IS-N-03	Potable Water Supply Pipe Penetration	IS- Intake Structure	997'-0"	IS-CW - Circulating Water Pump Bay	Potable Water Supply Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
289	IS-N-04	Capped Pipe Penetration	IS- Intake Structure	997'-0"	IS-CW - Circulating Water Pump Bay	Capped Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
290	IS-N-05	Capped Pipe Penetration	IS- Intake Structure	997'-0"	IS-CW - Circulating Water Pump Bay	Capped Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
291	IS-N-06	Intake Structure Sump Pump Discharge Penetration	IS- Intake Structure	981'-9"	IS-CW - Circulating Water Pump Bay	Intake Structure Sump Pump Discharge Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
292	IS-N-07	Discharge Tunnel Manhole Penetration	IS- Intake Structure	977'-2"	IS - Intake Structure	Discharge Tunnel Manhole Penetration	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
293	IS-N-08	Security System Conduit Penetration	IS- Intake Structure	1008'-1"	IS - Intake Structure	Security System Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
294	IS-N-09	Security System Conduit Penetration	IS- Intake Structure	1008'-1"	IS - Intake Structure	Security System Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
295	IS-N-10	Security System Conduit Penetration	IS- Intake Structure	1007'-5"	IS - Intake Structure	Security System Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
296	IS-N-11	Security System Conduit Penetration	IS- Intake Structure	1007'-5"	IS - Intake Structure	Security System Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
297	IS-N-12	"B" Raw Water Strainer Discharge Penetration	IS- Intake Structure	990'-0"	IS-RW - Raw Water Pump Bay	"B" Raw Water Strainer Discharge Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
298	IS-N-13	Screen Wash Piping Penetration	IS- Intake Structure	993'-6"	IS-RW - Raw Water Pump Bay	Screen Wash Piping Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
299	IS-N-14	Fire Protection Header Penetration	IS- Intake Structure	992'-6"	IS-CELL - Intake Structure, Intake Cell Space	Fire Protection Header Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
300	IS-N-15	Raw Water Header Penetration	IS- Intake Structure	991'-0"	IS-CELL - Intake Structure, Intake Cell Space	Raw Water Header Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
301	IS-S-03	Vacuum Priming Pipe Penetration	IS- Intake Structure	996' 0"	IS-CW - Circulating Water Pump Bay	Vacuum Priming Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
302	IS-S-04	Service Air Pipe Penetration	IS- Intake Structure	996' 0"	IS-CW - Circulating Water Pump Bay	Service Air Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
303	IS-S-05	Instrument Air Pipe Penetration	IS- Intake Structure	996' 0"	IS-CW - Circulating Water Pump Bay	Instrument Air Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
304	IS-S-06	Potable Water Pipe Penetration	IS- Intake Structure	996' 0"	IS-CW - Circulating Water Pump Bay	Potable Water Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
305	IS-S-07	Service Water Pipe Penetration (capped)	IS- Intake Structure	996'-0"	IS-CW - Circulating Water Pump Bay	Service Water Pipe Penetration (capped)	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
306	IS-S-08	Fire Protection Header Penetration	IS- Intake Structure	997'-6"	IS-CW - Circulating Water Pump Bay	Fire Protection Header Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
307	IS-S-09	Auxiliary Steam/Condensate Penetration	IS- Intake Structure	996'-0"	IS-CW - Circulating Water Pump Bay	Auxiliary Steam/Condensate Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
308	IS-S-10	Raw Water Header Penetration	IS- Intake Structure	994' 0"	IS-CW - Circulating Water Pump Bay	Raw Water Header Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
309	IS-S-11	"A" Raw Water Strainer Discharge Penetration	IS- Intake Structure	995' 4"	IS-RW - Raw Water Pump Bay	"A" Raw Water Strainer Discharge Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
310	IS-S-12	Instrument Air to RW Pump Bay	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	Instrument Air to RW Pump Bay	Incorporated or Exterior Passive (IEP)	1014 ft
311	IS-S-13	Lighting Conduit	IS- Intake Structure	1005'-2"	IS-RW - Raw Water Pump Bay	Lighting Conduit	Incorporated or Exterior Passive (IEP)	1014 ft
312	IS-W-01	Pipe Penetration (Capped)	IS- Intake Structure	1000'-6"	IS-CW - Circulating Water Pump Bay	Pipe Penetration (Capped)	Incorporated or Exterior Passive (IEP)	1014 ft
313	IS-W-02	Vacuum Priming to Pressure Tunnel Penetration	IS- Intake Structure	1000'-6"	IS-CW - Circulating Water Pump Bay	Vacuum Priming to Pressure Tunnel Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
314	IS-W-03	Vacuum Priming to Pressure Tunnel Penetration	IS- Intake Structure	1000'-6"	IS-CW - Circulating Water Pump Bay	Vacuum Priming to Pressure Tunnel Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
315	IS-W-04	120 vac Power Receptical Penetration	IS- Intake Structure	1007'-6"	IS - Intake Structure	120 vac Power Receptical Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
316	IS-W-05	Diesel Driven Fire Pump Fuel Oil Penetration	IS- Intake Structure	1012'-6"	IS - Intake Structure	Diesel Driven Fire Pump Fuel Oil Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
317	IS-W-06	Diesel Driven Fire Pump Exhaust Penetration	IS- Intake Structure	1014'-0"	IS - Intake Structure	Diesel Driven Fire Pump Exhaust Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
318	IS-W-10	A CW PUMP DISCHARGE PIPE	IS- Intake Structure	992'-0'	IS-CW - Circulating Water Pump Bay	A CW PUMP DISCHARGE PIPE	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
319	IS-W-11	B CW PUMP DISCHARGE	IS- Intake Structure	992'-0'	IS-CW - Circulating Water Pump Bay	B CW PUMP DISCHARGE	Incorporated or Exterior Passive (IEP)	1014 ft
320	IS-W-12	C CW PUMP DISCHARGE	IS- Intake Structure	992'-0'	IS-CW - Circulating Water Pump Bay	C CW PUMP DISCHARGE	Incorporated or Exterior Passive (IEP)	1014 ft
321	IS-W-13	20" PIPE PEN TO DISC TUNNEL	IS- Intake Structure	1000'-5'	IS-CW - Circulating Water Pump Bay	20" PIPE PEN TO DISC TUNNEL	Incorporated or Exterior Passive (IEP)	1014 ft
322	IS-W-15	Intake Structure El 974'-8 Ground Wire (South)	IS- Intake Structure	974'-8"	IS-CW - Circulating Water Pump Bay	Intake Structure El 974'-8 Ground Wire (South)	Incorporated or Exterior Passive (IEP)	1014 ft
323	IS-W-16	Intake Structure El 974'-8 Ground Wire (North)	IS- Intake Structure	974'-8"	IS-CW - Circulating Water Pump Bay	Intake Structure El 974'-8 Ground Wire (North)	Incorporated or Exterior Passive (IEP)	1014 ft
324	IS-W-50	Strainer Power Conduit Penetration A7325/PB-73T	IS- Intake Structure	1005'	IS-RW - Raw Water Pump Bay	Strainer Power Conduit Penetration A7325/PB-73T	Incorporated or Exterior Passive (IEP)	1014 ft
325	IS-W-51	AIPE Original RW Strainer Power Conduit Penetration	IS- Intake Structure	1004'-10"	IS-RW - Raw Water Pump Bay	AIPE Original RW Strainer Power Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
326	IS-W-52	Ground Wire Penetration	IS- Intake Structure	1003'-6"	IS-RW - Raw Water Pump Bay	Ground Wire Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
327	IS-W-53	"A" Strainer Power Conduit Penetration	IS- Intake Structure	996'-6"	IS-RW - Raw Water Pump Bay	"A" Strainer Power Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
328	IS-W-54	PA System Conduit Penetration	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	PA System Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
329	IS-W-55	LT-2889 Control Conduit Penetration EB7311	IS- Intake Structure	1004'-0"	IS-RW - Raw Water Pump Bay	LT-2889 Control Conduit Penetration EB7311	Incorporated or Exterior Passive (IEP)	1014 ft
330	IS-W-56	RW Valve Control Conduit Penetration EA7313/EA7306	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	RW Valve Control Conduit Penetration EA7313/EA7306	Incorporated or Exterior Passive (IEP)	1014 ft
331	IS-W-57	AIPE/ AC-10A Motor Heater Conduit Penetration	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	AIPE/ AC-10A Motor Heater Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
332	IS-W-58	AC-10A Motor Power Conduit EA66	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	AC-10A Motor Power Conduit EA66	Incorporated or Exterior Passive (IEP)	1014 ft
333	IS-W-59	AC-12A Junction Box Conduit Penetration	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	AC-12A Junction Box Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
334	IS-W-60	AC-10B Motor Power Conduit Penetration EB67	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	AC-10B Motor Power Conduit Penetration EB67	Incorporated or Exterior Passive (IEP)	1014 ft
335	IS-W-61	RW Valves Control Conduit Penetration EB7309/EB7214	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	RW Valves Control Conduit Penetration EB7309/EB7214	Incorporated or Exterior Passive (IEP)	1014 ft
336	IS-W-62	RW Valves Control Conduit Penetration EC7316/EC7320	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	RW Valves Control Conduit Penetration EC7316/EC7320	Incorporated or Exterior Passive (IEP)	1014 ft
337	IS-W-63	AC-10C Motor Heater Conduit Penetration 7317	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	AC-10C Motor Heater Conduit Penetration 7317	Incorporated or Exterior Passive (IEP)	1014 ft
338	IS-W-64	AC-10C Motor Power Conduit Penetration EC68	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	AC-10C Motor Power Conduit Penetration EC68	Incorporated or Exterior Passive (IEP)	1014 ft
339	IS-W-65	AC-10D Motor Power Conduit Penetration ED69	IS- Intake Structure	1002'-6"	IS-RW - Raw Water Pump Bay	AC-10D Motor Power Conduit Penetration ED69	Incorporated or Exterior Passive (IEP)	1014 ft
340	IS-W-66	AC-10D Motor Heater conduit Penetration 7324	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	AC-10D Motor Heater conduit Penetration 7324	Incorporated or Exterior Passive (IEP)	1014 ft
341	IS-W-67	RW Valve Control Conduit Penetration ED7321/ED7323	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	RW Valve Control Conduit Penetration ED7321/ED7323	Incorporated or Exterior Passive (IEP)	1014 ft
342	IS-W-68	Abandon in place Penetration (original AC-12B Power)	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	Abandon in place Penetration (original AC-12B Power)	Incorporated or Exterior Passive (IEP)	1014 ft
343	IS-W-69	AC-12B Power Conduit Penetration	IS- Intake Structure	1000'-0"	IS-RW - Raw Water Pump Bay	AC-12B Power Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
344	IS-W-70	AC-12B Strainer Power Conduit Penetration 7334A/B7330	IS- Intake Structure	1005'-0"	IS-RW - Raw Water Pump Bay	AC-12B Strainer Power Conduit Penetration 7334A/B7330	Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
345	IS-W-71	Lighting Conduit Penetration	IS- Intake Structure	1003'-6"	IS-RW - Raw Water Pump Bay	Lighting Conduit Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
346	IS-W-72	Seal Water Backup to RW Pump Seals Penetration	IS- Intake Structure	1001'-0"	IS-RW - Raw Water Pump Bay	Seal Water Backup to RW Pump Seals Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
347	IS-W-73	Ground Wire Penetration	IS- Intake Structure	1003'-6"	IS-RW - Raw Water Pump Bay	Ground Wire Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
348	IS-W-74	Screen Wash Pipe Penetration from SW pumps	IS- Intake Structure	1000'-0"	IS-CELL - Intake Structure, Intake Cell Space	Screen Wash Pipe Penetration from SW pumps	Incorporated or Exterior Passive (IEP)	1014 ft
349	IS-W-75	Grid Backwash Header Penetration	IS- Intake Structure	993'-8"	IS-CELL - Intake Structure, Intake Cell Space	Grid Gackwash Header Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
350	IS-W-76	Compressed Air Pipe Penetration	IS- Intake Structure	1001'-0"	IS-CELL - Intake Structure, Intake Cell Space	Compressed Air Pipe Penetration	Incorporated or Exterior Passive (IEP)	1014 ft
351	LI-1900	River Level Gauge	IS- Intake Structure	999'-0"	Intake Structure		Incorporated or Exterior Active (IEA)	1014 ft
352	MH31-E-03	MH-31 Conduit, 1900 series instrument conduit	Yard	1002'-7"	MH-31 - Man Hole 31	MH-31 Conduit, 1900 series instrument conduit	Incorporated or Exterior Passive (IEP)	1014 ft
353	MH31-E-04	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31	MH-31 Conduit	Incorporated or Exterior Passive (IEP)	1014 ft
354	MH31-E-05	MH-31 Conduit	Yard	996'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
355	MH31-E-06	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
356	MH31-E-07	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
357	MH31-E-08	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
358	MH31-E-09	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
359	MH31-E-10	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
360	MH31-E-11	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
361	MH31-E-12	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
362	MH31-E-13	MH-31 Conduit	Yard	995'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
363	MH31-E-14	MH-31 Conduit	Yard	995'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
364	MH31-E-15	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
365	MH31-E-16	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
366	MH31-E-17	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
367	MH31-E-18	MH-31 Conduit	Yard	995'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
368	MH31-E-19	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
369	MH31-E-20	MH-31 Conduit	Yard	996'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
370	MH31-E-21	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
371	MH31-E-22	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
372	MH31-E-25	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
373	MH31-E-26	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
374	MH31-E-27	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
375	MH31-E-28	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
376	MH31-E-29	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
377	MH31-E-30	MH-31 Conduit	Yard	998'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
378	MH31-E-31	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
379	MH31-E-32	MH-31 Conduit	Yard	996'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
380	MH31-E-33	MH-31 Conduit	Yard	996'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
381	MH31-E-34	MH-31 Conduit	Yard	997'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
382	MH31-E-35	MH-31 Conduit	Yard	996'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
383	MH31-E-36	MH-31 Conduit	Yard	1002'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
384	MH31-E-37	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
385	MH31-E-38	MH-31 Conduit	Yard	1001'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
386	MH31-E-39	MH-31 Conduit	Yard	995'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
387	MH31-E-40	MH-31 Conduit	Yard	995'-7"	MH-31 - Man Hole 31		Incorporated or Exterior Passive (IEP)	1014 ft
388	MH31-N-01	Conduit Penetration for RW strainer power	Yard	1000'-0"	MH-31 - Man Hole 31	Conduit Penetration for RW strainer power	Incorporated or Exterior Passive (IEP)	1014 ft
389	MH31-N-02	Conduit Penetration for RW strainer power	Yard	1000'-0"	MH-31 - Man Hole 31	Conduit Penetration for RW strainer power	Incorporated or Exterior Passive (IEP)	1014 ft
390	Proc AOP-01	Acts of Nature	N/A	N/A	N/A	N/A	Procedure	N/A
391	Proc EPIP-TSC-2	Catastrophic Flooding Preparations	N/A	N/A	N/A	N/A	Procedure	N/A
392	Proc PE-RR-AE-1001	Flood Barrier and Sandbag Staging and Installation	N/A	N/A	N/A	N/A	Procedure	N/A
393	Room 02 Wallls/Floors	Walls and Floors	Aux Bldg	1004'-8"	Room 2		Incorporated or Exterior Passive (IEP)	1014 ft
394	Room 04 Wallls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 4		Incorporated or Exterior Passive (IEP)	1014 ft
395	Room 06 Wallls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 6		Incorporated or Exterior Passive (IEP)	1014 ft
396	Room 07 Wallls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 7		Incorporated or Exterior Passive (IEP)	1014 ft
397	Room 08 Wallls/Floors	Walls and Floors	Aux Bldg	1007'-8"	Room 8		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
398	Room 09 Walls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 9		Incorporated or Exterior Passive (IEP)	1014 ft
399	Room 10 Walls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 10		Incorporated or Exterior Passive (IEP)	1014 ft
400	Room 16 Walls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 16		Incorporated or Exterior Passive (IEP)	1014 ft
401	Room 17 Walls/Floors	Walls and Floors	Aux Bldg	1007'-8"	Room 17		Incorporated or Exterior Passive (IEP)	1014 ft
402	Room 19 Walls/Floor	Walls and Floors	Aux Bldg	989'-1007'	Room 19	Flr. El. 989'-0", walls El. 1007' down. El. 989'-0" along Col Row C between Col. Rows 1a & 9 & along Col. Row D between Col. Rows 1a & 2b	Incorporated or Exterior Passive (IEP)	1014 ft
403	Room 22 Walls/Floor	Walls and Floors	Aux Bldg	971'-8"	Room 22		Incorporated or Exterior Passive (IEP)	1014 ft
404	Room 23 Walls/Floors	Walls and Floors	Aux Bldg	971'-8"	Room 23		Incorporated or Exterior Passive (IEP)	1014 ft
405	Room 24 Walls/Floor	Walls and Floors	Aux Bldg	989'-8"	Room 24		Incorporated or Exterior Passive (IEP)	1014 ft
406	Room 24a Walls/Floors	Walls and Floors	Aux Bldg	989'-8"	Room 24a		Incorporated or Exterior Passive (IEP)	1014 ft
407	Room 25 Walls/Floor	Walls and Floors	Aux Bldg	1004'-8"	Room 25		Incorporated or Exterior Passive (IEP)	1014 ft
408	Room 25a Walls/Floors	Walls and Floors	Aux Bldg	1007'-8"	Room 25a		Incorporated or Exterior Passive (IEP)	1014 ft
409	Room 26 Walls/Floors	Walls and Floors	Aux Bldg	1004'-8"	Room 26		Incorporated or Exterior Passive (IEP)	1014 ft
410	Room 27 Walls/Floor	Walls and Floors	Aux Bldg	1007'-8"	Room 27		Incorporated or Exterior Passive (IEP)	1014 ft
411	Room 29 Walls/Floor	Walls and Floors	Aux Bldg	1004'-8"	Room 29		Incorporated or Exterior Passive (IEP)	1014 ft
412	Room 34 Walls/Floors	Walls and Floors	Aux Bldg	1004'-8"	Room 34		Incorporated or Exterior Passive (IEP)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
413	Room 52 Wallls/Floors	Walls and Floors	Aux Bldg	1004'-8"	Room 52		Incorporated or Exterior Passive (IEP)	1014 ft
414	Room 56 Walls/Floor	Flr. Slab 1011' & walls along Col. Rows C &D between Col. Rows 1a thru Col. Row 9	Aux Bldg	1011' - 1014'	Room 56	Flr. Slab 1011' & walls along Col. Rows C & D between Col. Rows 1a thru Col. Row 9	Incorporated or Exterior Passive (IEP)	1014 ft
415	Room 63 Walls/Floor	1007"-0" to 1014'-0"	Aux Bldg DG#1	1007'-0"	Room 63	Flr.DG-#1 Flr.1007"-0", walls 1014, dn. 1007'-0" along Col Row 1a, & 64' west of Col. Row D, 15' north of Col. Row DG-#1 DG-#2 Divider wall (south face) & wall Along Col. Row D.1007', Walls 1014 dn. To 1007,	Incorporated or Exterior Passive (IEP)	1014 ft
416	SD-127	Drain line Isolation valve	Aux Bldg	999'-0"	Room 19	Manual Isolation Valve, TCS Drains to Aux Bldg	Incorporated or Exterior Active (IEA)	1014 ft
417	SD-128	Drain line Isolation valve	Aux Bldg	997'-0"	Room 19	Manual Isolation Valve, Aux Bldg Drains to Lift Station	Incorporated or Exterior Active (IEA)	1014 ft
418	VD-681	Drain line Isolation valve	Aux Bldg	1011'-0"	56 - Switchgear Room	SWITCHGEAR ROOM A AHU VA-87 DRAIN LINE ISOLATION VALVE	Incorporated or Exterior Active (IEA)	1014 ft
419	VD-682	Drain line Isolation valve	Aux Bldg	1011'-0"	56 - Switchgear Room	UP ELEC PENN & SWTCHGR AHU VA-85, 86 & 88 DRAIN LINE ISOL VALVE	Incorporated or Exterior Active (IEA)	1014 ft
420	WD-1303	Drain line Isolation valve	Aux Bldg	989'-0"	Room 10	Isolation Valve , CARP TO SPENT REGEN TANK	Incorporated or Exterior Active (IEA)	1014 ft
421	WD-250	Drain line Isolation valve	Aux Bldg	993'-0"	Room 24A	ISOLATION VALVE, RAILROAD DOCK AREA SUMP	Incorporated or Exterior Active (IEA)	1014 ft
422	WD-1216	Sump Pump WD-30B Discharge Isolation Valve	Rad WasteBldg.	1005'-0"	Room 502	Sump Pump WD-30B Discharge Isolation Valve	Incorporated or Exterior Active (IEA)	1014 ft
423	WD-1217	Sump Pump WD-30A Discharge Isolation Valve	Rad WasteBldg.	1010'-0"	Room 506	Sump Pump WD-30A Discharge Isolation Valve	Incorporated or Exterior Active (IEA)	1014 ft

Item	Feature ID/ Procedure No.	Description	Bldg./Area	CLB Feature Elevation	Room	Other Description (if any)	Feature/Barrier Type	CLB Flood El. At Feature
424	WD-1218	Pump WD-31B Discharge Isolation Valve	Rad WasteBldg.	1010'-0"	Room 506	Pump WD-31B Discharge Isolation Valve	Incorporated or Exterior Active (IEA)	1014 ft
425	WD-1219	Pump WD-31A Discharge Isolation Valve	Rad WasteBldg.	1010'-0"	Room 506	Pump WD-31A Discharge Isolation Valve	Incorporated or Exterior Active (IEA)	1014 ft