MIRA
Dissolution Authority
300 Maxim Road, Hartford, Connecticut 06114 Telephone (860) 757-7700 Fax (860) 757-7725

MEMORANDUM

TO: **South Meadows Transition Committee**

FROM: **William P. Beccaro, Committee Chairperson**

DATE: **May 2, 2025**

RE: **Notice of Regular Meeting**

There will be a **regular meeting** of the **South Meadows Transition Committee** of the MIRA Dissolution Authority's Board of Directors on ***Wednesday, May 7, 2025 at 11:00 a.m. in the Board Room at 300 Maxim Road, Hartford, CT. Members of the public may also attend the meeting telephonically by calling (929) 205-6099, entering Meeting ID: 858 1861 1943 and Passcode: 661934# when prompted. (NOTE - there is very limited physical space in the Board Room - consequently, virtual public attendance is encouraged).*** The meeting is scheduled to conclude at 12:30 p.m. The purpose of this meeting will be:

1. Call to Order; Chair's Welcome

2. Public Comment (3 minutes per speaker)

3. Approval of Minutes of the April 9, 2025 Regular Committee Meeting ***(Attachment 1)***

4. Update and Discussion Regarding the South Meadows Remediation Under the *Exit Strategy*^{TM} Contract

5. Update and Discussion Regarding South Meadows Additional Operating Plans

    a. Water Management ***(Attachment 2)***
    b. Engineered Control Inspections ***(Attachment 3)***
    c. Fire, Safety and Security ***(Attachment 4)***
    d. Structural Inspections ***(Attachment 5)***
    e. Routine Facility Maintenance ***(Attachment 6)***
    f. Site Energy ***(Attachment 7)***
    g. Other Utilities ***(Attachment 8)***

6. Such other items that may properly come before the Committee.

Cc: Bert Hunter
Mark Daley
Christopher Shepard
Raymond Frigon (CT-DEEP)
Claire Quinn (CT-DEEP)
Jade Barber (CT-DEEP)
Robert Carr (Weston & Sampson)
Carl Stopper (TRC)

Attachment 1

South Meadows Transition Committee
April 9, 2025
Meeting Minutes

A Regular Meeting of the South Meadows Transition Committee of the MIRA Dissolution Authority was held on April 9, 2025. Present either in-person or via video or audio conferencing were:

Committee Present:	Director William Beccaro, Committee Chairperson (joined via Zoom at approximately 12:01 PM) Director David Barkin (via Zoom) Director Matthew Dayton (via Zoom) Director David Steuber Director Bert Hunter (Ex Officio) Member William DiBella
Other Directors Present:	None
Other Members Present:	Thomas Swarr (via Zoom) Clarence Corbin (via Zoom)
Authority Staff Present:	Mark T. Daley, President & CFO Christopher Shepard, Environmental Compliance Manager David Bodendorf, Manager of Engineering, Construction and Power Assets Thomas Gaffey, Director of Recycling & Enforcement Roger Guzowski, Supply Chain Manager Cheryl Kaminsky, Comptroller (via Zoom) Ann Catino (Halloran & Sage), General Counsel
CT-DEEP Staff Present:	Jade Barber (via Zoom)
Others Present:	Robert Carr, Weston & Sampson (via Zoom)

This meeting was recorded via ZOOM conferencing and is posted on the Authority's website at: https://www.ctmira.org/mira-dissolution-authority-south-meadows-transition-committee

1. Call to Order; Chair's Welcome

Board Chairperson Hunter called the meeting to order at 11:46 AM, noting that Committee Chairperson Beccaro was unavailable due to responsibilities at the State Legislature. Board Chairperson Hunter apologized for the delay in the meeting start time, which delay resulted from the previous (Finance Committee) meeting extending past its scheduled end time.

2. Public Comment (3 minutes per speaker)

Board Chairperson Hunter invited members of the public to address the Committee. There were no public comments, and Board Chairperson Hunter proceeded with the next agenda item.

3. Approval of Minutes of the March 5, 2025 Regular Committee Meeting

Board Chairperson Hunter requested a motion to approve the minutes of the March 5, 2025 regular Committee Meeting. The motion was moved by Director Steuber and seconded by Director Barkin.

Board Chairperson Hunter asked if there were any corrections requested. Hearing none, Board Chairperson Hunter asked for a vote to approve the minutes. The motion was approved by those in attendance, as indicated below:

Director	Moved	Second	Aye	Nay	Abstain
Chairperson Beccaro					(absent for vote)
David Barkin		X	X		
Matthew Dayton			X		
Rachel Taylor					(absent)
John Fonfara					(absent)
David Steuber	X				X
Bert Hunter (Ex Officio)			X		

4. Update and Discussion Regarding the following:

a. South Meadows Remediation Under the Exit Strategy™ Contract

President Daley asked Mr. Shepard to provide the update for this matter. Mr. Shepard stated that the environmental land use restriction (ELUR) for the PCB contaminated soil and engineered control installed in the "contractor parking lot" was recorded in the City of Hartford's land records on 3/13/2025. Mr. Shepard indicated that CT-DEEP then provided its Notice of Receipt for the recorded ELUR, as required by State regulations, on 4/3/2025

Mr. Shepard then stated that TRC Environmental Corporation now has all the information necessary to finalize the sitewide Verification Report for certification by a Connecticut Licensed Environmental Professional (LEP), followed by submission of the Verification Report to CT-DEEP. Mr. Shepard noted that TRC is working to complete and submit the Verification Report by the end of this month.

b. South Meadows Redevelopment Considerations Study

Mr. Daley asked Mr. Shepard to also provide the update for this matter. Mr. Shepard began by noting that Weston & Sampson Engineers, Inc. (WSE) finalized the South Meadows Redevelopment Considerations Study report, and

that hard copies of the final report were provided to the following: the Mayor of Hartford, the Hartford City Council, and the Hartford Department of Development Services – Economic Development Division. Mr. Shepard also noted that two hard copies were provided to the Hartford Public Library (one copy to 500 Main St., and one copy to the Camp Field Branch), for reference and review by the general public. Mr. Shepard stated that one copy has also been forwarded to the State's Legislative Library.

Mr. Shepard then discussed the final Public Informational meeting that was held on 3/18/2025 at the Metzner Community Center, noting that approximately 15 or so members of the public participated in the meeting either in-person or via Zoom. Mr. Shepard indicated that the presented information seemed to be generally well-received by those in attendance.

Member DiBella asked if hard copies of the final South Meadows Redevelopment Considerations Study report were submitted to the Legislative Committees of Cognizance. Mr. Shepard indicated that hard-copies were not submitted to those Committees, but that all stakeholders were notified via email about the final report, which notification included a link to the full report on the Authority's website. Member DiBella recommended that hard copies of the final report be submitted to the Legislative Committees of Cognizance.

5. Update and Discussion Regarding South Meadows Additional Operating Plans

Board Chairperson Hunter introduced this Agenda item and then asked President Daley to lead the discussion. President Daley began the discussion by stating that the Authority is making good progress on the seven additional operating plans (in addition to the South Meadows Redevelopment Considerations Study) that have previously been identified as necessary and appropriate for the future caretaker of the South Meadows site to have readily available. President Daley continued by noting that the additional operating plans are detail-oriented plans that can be utilized by the future caretaker to better understand the nuts and bolts of taking care of the property once the Authority is gone. Mr. Daley then noted that the Authority's intent is to finalize these plans by the date of the next Committee meeting, including the incorporation of any comments that may be received from the Committee over the next few weeks, and that today's discussions would touch on the highlights of each plan.

a. <u>Water Management</u>

President Daley then asked Mr. Bodendorf to begin the discussion of the stormwater management aspects of the Water Management Plan. Mr. Bodendorf began by noting that the site is subject to the Industrial Stormwater General Permit, and that the Authority complies with that permit via a variety of inspections (monthly, semi-annual), monitoring events (quarterly, semi-annually, and annually), and annual training. Mr. Bodendorf then noted that additional stormwater discharge information will be added to the draft Water Management Plan, including the Stormwater Pollution Prevention Plan, example stormwater monitoring reports that are submitted to DEEP, and example inspection reports. Mr. Bodendorf also indicated that information regarding the vendor that conducts the stormwater monitoring for the Authority has been included.

Mr. Shepard then discussed the wastewater-related portions of the Water Management Plan, noting that there are two active wastewater discharge permits for discharges to the sanitary sewer. Mr. Shepard identified the first permit as the General Permit for Significant Industrial Users, which covers the discharge of water from the coal storage area/coal pond. Mr. Shepard continued that the second permit is an individual permit that was issued when the waste-to-energy plant was operational, noting that there are no longer any process wastewaters generated in the plant, but there is a considerable amount of rainwater intrusion through leaks in the plant roof and drainage piping. Mr. Shepard then stated that each of these permits has a specific Operation and Maintenance ("O&M") Plan that was developed in accordance with the permit applications, and that have been reviewed by DEEP as part of the permitting. Mr. Shepard indicated that these O&M Plans have not been included with the draft Water Management Plan in the Committee package for brevity purposes, but that the O&M Plans are readily available for DAS review.

Mr. Shepard also noted that the draft Water Management Plan includes a summary with photos of the electrical circuits that need to remain "live" in order to power the wastewater systems, until such time as the discharges are permanently ceased. Mr. Shepard also indicated that reporting information still needs to be added to the draft Water Management Plan.

b. Engineered Control Inspections

President Daley then asked Mr. Shepard to provide an overview regarding inspections of the engineered controls. Mr. Shepard stated that the engineered control inspections are related to the site remediation that has been conducted over the course of the last 20-plus years by TRC under the *Exit Strategy*^{TM} contract. Mr. Shepard continued that a number of engineered controls have been installed over certain areas at the property as part of the remediation of soil contamination. Mr. Shepard then stated that the regulations require that the engineered controls be inspected on a regular (semi-annual or annual) basis, with subsequent reports generated. Mr. Shepard then noted that any damage to engineered controls that might be discovered during the inspections would have to be repaired in a certain amount of time, and that there are reporting requirements that would also apply in such a situation.

Mr. Shepard then stated that TRC developed the EC inspection program back in 2018 or 2019, and that it will have to be updated to incorporate the new ELUR that was just recorded on the property in mid-March.

c. Fire, Safety and Security

At President Daley's request, Mr. Gaffey provided an overview of the Fire, Safety and Security Plan. Mr. Gaffey began by noting that there are a number of redactions in the draft Plan in the Committee package, which were important to prevent giving out security information, such as codes, combinations and locations of cameras that we would not want in the public domain. Mr. Gaffey continued by stating that the majority of the 80 acres of the property has perimeter fencing, noting that the one exception is the tall concrete flood control dike wall on the northeast

side. Mr. Gaffey noted that have been breaches in the fence from intruders cutting the fence, but that has not happened in 3 or 4 months.

Mr. Gaffey indicated that there are also cameras in key locations, both inside and outside the facility; and that staff cell phones will ping if a vehicle or person passes by those cameras. Mr. Gaffey then provided an overview of the security guard patrols that are conducted seven days per week, noting that the post orders for the guards are attached to the draft Fire, Safety and Security Plan.

Regarding building security, Mr. Gaffey stated that all doors have been secured both for the WPF and the PBF, noting that there were more than 80 doors unsecured when the plant shut down. The Authority installed new locks in all of the unsecured doors, as well as made repairs to doors that would not close and lock due to damage. Mr. Gaffey also noted that metal sheeting was welded over small door windows, and that wire mesh was installed over large glass doors to prevent intruders from breaking through the glass and entering the building.

Mr. Gaffey then discussed illegal dumping issues, which the Authority has been able to minimize on-site by installing a new gate with a padlock at the entrance to the Gate 20 driveway, which provides access to 100 Reserve Road (the PBF). Installation of the new gate has helped to minimize the illegal dumping that used to occur underneath the Charter Oak Bridge (which crosses the South Meadows property). Mr. Gaffey noted that some illegal dumping still occurs outside of that fence gate, but that it has been minimal compared to what we experienced when the Authority first moved to the site.

Mr. Gaffey continued that site intruders are another concern, noting that such trespassers tend to go into the PBF and not the WPF. Mr. Gaffey then related that the last incident of PBF intruders occurred approximately three weeks ago, when a total of four individuals were seen on camera. The Hartford Police Department was notified and responded to the site; four police officers responded and went through the Facility with Frank Ranieri, who used to work at the PBF with NAES and is very familiar with the site. The police officers were unable to find the intruders in the PBF; they were obviously hiding because the cameras caught them leaving the Facility after the police left the site. Mr. Gaffey then indicated that no intruders have been seen in the PBF since that incident, because they were probably frightened that they were about to be arrested. The Hartford Police Department is continuing to follow-up on this incident, noting that there was a vehicle near the site at the time of the incident that was later identified as the vehicle that the four intruders were traveling in. Mr. Gaffey then concluded the security discussion by noting that the main concerns with intrudes are for safety, because the facility is difficult to navigate and there is still high-voltage electrical service that is active in many places on-site.

Regarding fire controls, Mr. Gaffey stated that the WPF administration building (i.e., the Authority's office building) and the adjacent WPF warehouse have wet sprinkler systems in-place for fire suppression. Mr. Gaffey also noted that the Jet shop has a heat detection system, but no sprinklers. In the remaining areas of the site, the fire sprinkler systems have been shut off, with the approval of the Hartford

Fire Marshal's office. Mr. Gaffey then mentioned that Fire Department Knox boxes have been installed at the site gates, so that the Hartford Fire Department has access to this site at any time that they need access in the event of an emergency.

Mr. Gaffey offered to answer any questions that anyone may have regarding this Plan; hearing no questions, President Daley then asked Mr. Bodendorf to discuss the Structural Inspection Plan.

d. Structural Inspections

Mr. Bodendorf began the overview of the Structural Inspections Plan by reminding the Committee that the Authority has hired HDR to complete a structural inspection plan for the Power Block (PBF) side of the site. Mr. Bodendorf continued that it was determined that the steel structure of the waste receiving and processing building (WPF), having been built in the 1980s, was not in need of such an evaluation; so, the focus of the structural inspection program will be on the older sections of the site, where the buildings were built up to a hundred-plus years ago.

Mr. Bodendorf then discussed the draft technical memo and draft inspection form for the structural inspections, which were included in the Committee package. Mr. Bodendorf continued by noting that the inspection plan includes photographs and drawings to orientate future inspectors, so that they would be able to reproduce the inspection. Mr. Bodendorf also pointed out that the photographs show the current conditions of all of the areas of concern, so that future inspectors will be able to use those photos for comparison.

In response to a question from Member DiBella regarding the firm completing the Structural Inspection Plan, Mr. Bodendorf noted that HDR is big firm within the waste industry, and that they have done a significant amount of work on-site in the past.

Hearing no additional questions, President Daley indicated that this Plan will be a pretty important plan for whoever is going to be taking care of the site moving forward.

e. Routine Facility Maintenance

President Daley then asked Mr. Gaffey to provide an overview of the Routine Facility Maintenance Plan for the site. Mr. Gaffey began by noting that routine facility maintenance is generally what you would expect at a large site like the South Meadows. Mr. Gaffey cited examples of routine landscaping activities, such as lawn mowing and tree trimming, and, sometimes, tree removal after a storm. Mr. Gaffey then noted the importance of snow removal during the winter, to ensure that the Hartford Fire Department has access throughout the site. Mr. Gaffey continued that snow removal activities are conducted by the Authority's contractor on both portions of the site (PBF and WPF), except for the Eversource gate (Gate 40 off Reserve Road), which provides Eversource with access to the switchyards.

Mr. Gaffey then indicated that mechanical gate repairs have to be dealt with from time to time, including the main gate entrance to the WPF, plus two interior gates that go from the WPF to the PBF side of the property. Mr. Gaffey also touched on other routine maintenance items, such as:

- fence repair and replacement,
- the fire protection systems which require routine inspections and servicing,
- the HVAC system for the Authority's office building (which has maintenance issues from time to time), and
- the two sets of stack lights for FAA compliance (Brainard Airport is located just south of the site).

Specific to the stack lights, Mr. Gaffey noted that they must be functional at all times. Mr. Gaffey continued that the stack lights have photo cells that determine the level of flashing light illumination (daylight, twilight or nighttime). Mr. Gaffey also stated that SkyTec, Inc., from Maine, is the firm that the Authority has used for any repairs or service on the stack lights.

Mr. Gaffey then provided an overview of truck scale calibration and cleaning, noting that the scales will continue to be of use as the Facility is dismantled and scrap or other valuable materials are removed from the site. Mr. Gaffey indicated that scale #4, located in the rear of the WPF, will need to be calibrated and cleaned on a regular basis to ensure accurate weights of trucks before they go on the road.

Mr. Gaffey concluded by noting that the Authority offices also have janitorial services, and trash and recycling removal services.

f. Site Energy Plan

President Daley provided a brief overview of the site energy distribution, noting that the purpose of the Site Energy Plan is to document the requirements associated with all things on-site that need to remain powered. President Daley also noted that the site energy distribution is complicated by the fact that the entire facility used to operate to produce power.

Mr. Bodendorf then provided an overview of the site energy distribution, stating that the vast majority of the electricity used at the site is imported through what is commonly referred to as the "2X" transformer. Mr. Bodendorf continued that the 2X transformer has 115,000 volts on the high side, which makes it a "bulk electrical system" element subject to NERC compliance, which is administered in our region by the NPCC. Mr. Bodendorf stated that NERC compliance is essentially now limited to maintenance of the battery systems that provide backup power to open disconnects in the event of an emergency. Mr. Bodendorf also indicated that there are some historic mis-operations that occurred that are still in NPCC's system and that the Authority is trying to work through with NAES, who was contracted to facilitate the winding down and attempted removal of the 2X transformer from the bulk electric system. Mr. Bodendorf indicated that additional details need to be

worked out with NPCC before the removal of the 2X transformer from the bulk electric system might be allowed.

Mr. Bodendorf then referred to the portion of the Site Energy Plan contained in the Committee package on which active electrical circuits have been highlighted. Mr. Bodendorf noted that the yellow-highlighted electrical circuits pertain to wastewater handling activities; and that the orange-highlighted circuits power other things, such as the stack lights, security lighting, the gate openers, and the scales.

Mr. Bodendorf also noted that pertinent contact information has been included in the Site Energy Plan, such as Eversource and NPCC. Mr. Bodendorf also noted that Frank Ranieri's information has been included; Mr. Ranieri is the E&I Technician who has a significant amount of institutional knowledge, and could prove to be a valuable resource to whoever is running the site in the future.

Mr. Bodendorf then said that the focus of the Site Energy Plan has been on the PBF side; however, the Authority will provide information regarding critical circuits on the WPF side, as well.

Member DiBella then asked about the status of the switchyards and transformers, inquiring if they were active, and owned and maintained by Eversource or the Authority. Mr. Bodendorf confirmed that the Authority owns the 2X transformer. Mr. Bodendorf also indicated that he asked Eversource a couple of months prior if Eversource was interested in taking possession of the 2X transformer, but Eversource declined. Mr. Bodendorf then affirmed that the 2X transformer is located within the boundaries of Eversource's switchyard.

Member DiBella asked if the Eversource switchyard is a functioning part of the overall regional grid. Mr. Bodendorf confirmed that removing the 2X transformer from the site would result in zero power for the South Meadows site, but it would not affect Eversource's ability to transmit energy anywhere else. Mr. Bodendorf also reiterated that the Authority owning this one piece of electrical equipment makes us subject to NERC compliance requirements.

Member DiBella then indicated that Eversource must have access to the site in order to maintain the switchyards, and asked if that poses a security problem. In response, President Daley noted that Eversource currently controls its own access, and Mr. Bodendorf noted that Eversource has its own security fencing within our site.

Member DiBella then asked about future reuse of the property, indicating that it was his understanding that the switchyard had to remain in-place or that it could potentially be moved, but that it would have to stay "within the geographical 82 acres" of the site. President Daley indicated that moving it outside of the 80 acres has been looked at, and Mr. Shepard confirmed that the Study completed by Weston & Sampson included a cost estimate to move the switchyards to "Parcel 1," which is the corner lot owned by Eversource that is currently used as a lay-down yard. Mr. Shepard further specified that, if there was a desire to develop this property for residential uses, then the switchyards would have to be moved; and that the Weston

& Sampson cost estimate was developed based on moving the switchyards to a parcel already owned by Eversource.

Member DiBella asked who would be responsible for paying the costs to move the switchyards; the rate payers? Board Chairperson Hunter indicated that he believes that such costs would fall to whoever is forcing the move, probably the developer.

g. Other Utilities

President Daley asked Mr. Shepard to provide an overview of the Other Utilities. Mr. Shepard began by discussing the water service, which enters the South Meadows site from three locations – two water mains to the PBF, and one to the WPF. Mr. Shepard noted that all of the MDC account numbers for the water services will be documented.

Mr. Shepard then noted that each water service has backflow preventers installed to prevent potential contamination of water mains feeding the site. As an example of a potential backflow situation, Mr. Shepard mentioned that MDC water is used for priming the pump for discharging the coal pond water; and that the backflow preventer would prevent that water from being pumped out to the water main if, for example, there was an issue with over pressurization of the pumped water.

Mr. Shepard then stated that each backflow preventer would be documented with photos and on a map, and that the backflow preventers need to be inspected on annual basis. Mr. Shepard said that the Authority has historically used Aqua Backflow/Gallicchio Plumbing for the inspections; and, if there are any issues found during the inspections, then the failing backflow preventer(s) would have to be rebuilt or replaced.

Mr. Shepard then continued by discussing natural gas service to the property, noting that there used to be three natural gas lines into the site – two into the WPF, and one into the PBF. Mr. Shepard stated that the natural gas line to the PBF and one of the two natural gas lines to the WPF have been disconnected at the gas mains in the streets. Mr. Shepard continued by noting that the one remaining active natural gas service provides fuel for the boiler to heat the Authority's office space, as well as to provide hot water.

President Daley then indicated that the package of documents discussed during this meeting will ultimately be wrapped up and handed over, left on-site, and/or made available on-line for the future caretakers of the property. President Daley also requested that any additional questions be asked within the next couple of weeks so that they can be address and the so that the Plans can hopefully be finalized by the time they are included in the next Committee package.

7. Adjournment

Board Chairperson Hunter asked if any Directors or Members of the Committee had any other items for consideration. Hearing none, Board Chairperson Hunter adjourned the meeting at 12:22 PM.

Attachment 2

South Meadows Stormwater Operating Plan

Stormwater Permit Compliance Operating Plan

4/30/2025

Summary

The South Meadows Facility maintains registration under the General Permit for the Discharge of Storm Water Associated with Industrial Activities (Registration GSI 000118). It is believed the General Permit Registration must be maintained until at least the date upon which the site receives certification of closure pursuant to the solid waste closure requirements. A Stormwater Pollution Prevention Plan by Fuss & O'Neill (revised April 2015) describes the site in detail, including operational activities conducted at the site prior to it being shut down. Activities performed to maintain compliance with the permit during each permit year (October 1 through September 30) include:

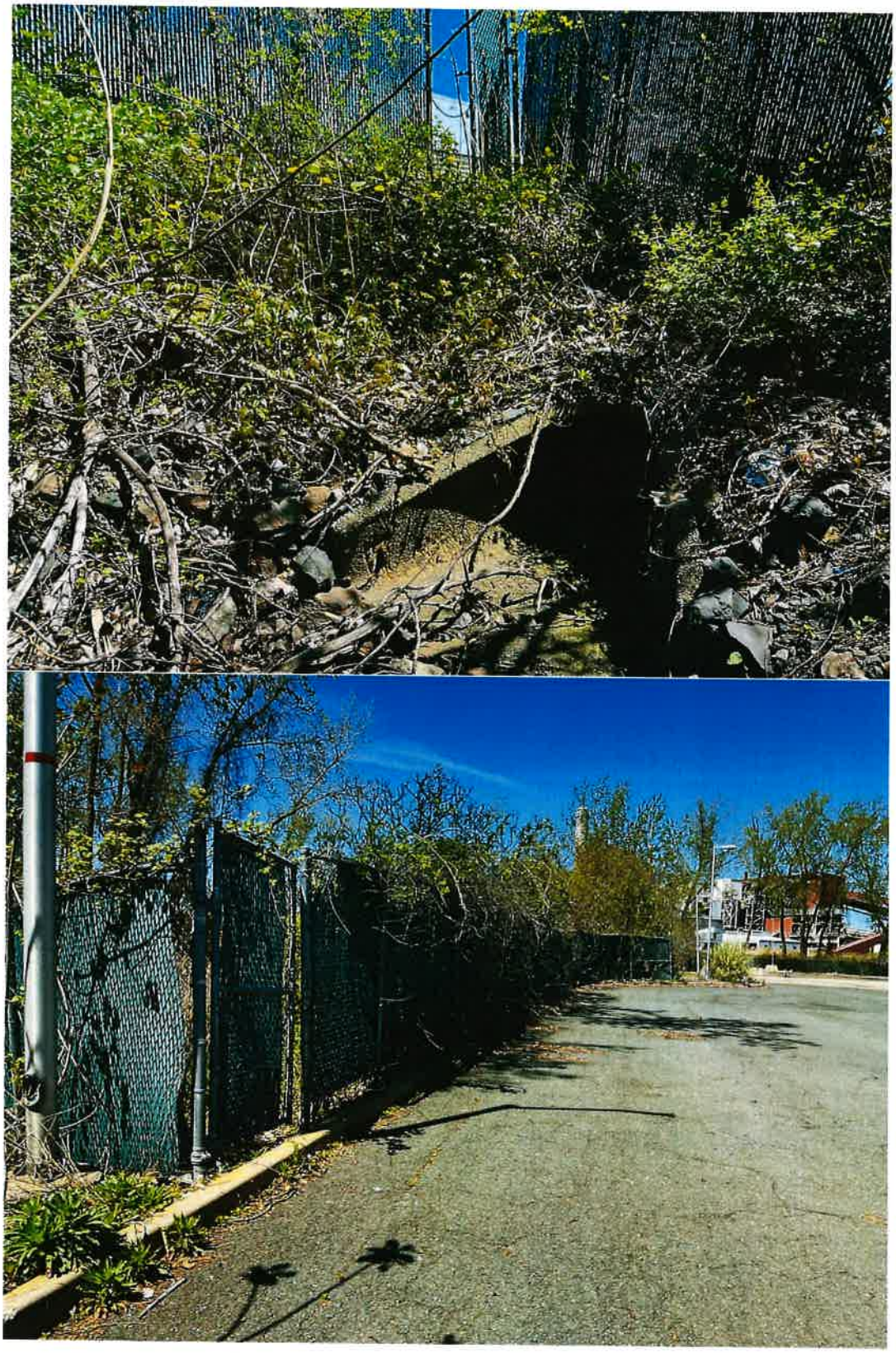
1) Routine Site inspections at a frequency (monthly) sufficient to confirm the site is not contributing pollution to stormwater. Note that although solid waste activities ceased in 2022, there are still potential pollutant sources on site, including but not limited to (electrical transformers, residual waste/ash material, site erosion, oxidation of metals)
2) Quarterly storm water visual monitoring of three storm water outfalls. This activity is currently conducted by Pace Analytical (who acquired MDA's contractor, Analytical Consulting Technology in 2024). Visual Monitoring is conducted by Pace personnel who collect samples and provide the quarterly visual monitoring forms to MDA staff for record keeping on-site.
3) Semi-annual analytical monitoring of three storm water outfalls and submission of associated storm water monitoring reports to DEEP. Pace Analytical personnel collect samples and perform required analytical monitoring, which Pace reports to MDA personnel. MDA Personnel complete Stormwater Monitoring Reports using the CTDEEP form and submit such reports to CTDEEP within 90 days of sample collection. MDA personnel maintain such reports on site and track all analytical parameters for exemptions, communicating any new exemptions to Pace Analytical.
4) Semi-annual comprehensive site inspections and associated reports are performed by MDA personnel. Inspection reports are completed by MDA personnel and kept on-site.
5) Annual analytical monitoring of three storm water outfalls and submission of associated storm water monitoring reports to DEEP. Pace Analytical personnel collect samples and perform required analytical monitoring, which Pace reports to MDA personnel. MDA Personnel complete Stormwater Monitoring Reports using the CTDEEP form and submit such reports to CTDEEP within 90 days of sample collection. MDA personnel maintain such reports on site. Annual analytical parameters cannot qualify for exemption.
6) MDA staff (currently the Environmental Compliance Manager and the Manager of Engineering, Construction, and Power Assess) utilize a Fuss & O'Neill training video to maintain compliance with the annual training requirement.
7) MDA Personnel maintain all records on-site required by the General Permit.

Pace Contact Information:

Stephanie Monat
Project Manager 1
O: 203-757-3960 | stephanie.monat@pacelabs.com

Supporting Documents *Not* Attached: Fuss & O'Neill training video (located on MDA server)
CTDEEP General Permit for Stormwater Discharges Associated with Industrial Activity: Stormwater Pollution Prevention Plan by Fuss & O'Neill (hard copy in MDA office, electronic copy on MDA server)

Photographs of Stormwater Outfalls



Stormwater Outfall 006



Stormwater Outfall 007



Stormwater Outfall 009

Example Stormwater Monitoring Report

MIRA
Dissolution Authority
300 Maxim Road, Hartford, Connecticut 06114 Telephone (860) 757-7700 Fax (860) 757-7725

EMAIL deep.stormwaterstaff@ct.gov

December 19, 2024

CTDEEP Bureau of Water Protection & Land Reuse
Planning & Standards Division
79 Elm Street
Hartford, CT 06106

Re: Stormwater General Permit Registration # GSI000814
MIRA CSWS Waste Processing Facility and Power Block Facility - Stormwater Monitoring Reports

To whom it may concern:

Enclosed are the semi-annual Stormwater Monitoring Reports (SMRs) for the MIRA CSWS Waste Processing Facility and Power Block Facility Outfalls 006, 007 and 009, collected on September 26, 2024, to satisfy the a portion of the monitoring requirement for the **2023-2024** permit year. MIRA DA is submitting these reports in compliance with the "General Permit for the Discharge of Stormwater Associated with Industrial Activity" (Issued 10/01/11), as registered by Permit No. GSI000814. As of this submission, Outfall 006 is now exempt from monitoring for COD. ***Note that Outfall 007 could not be sampled as there was no discharge observed during the storm event.***

Please note that page 2 of 5 (acute toxicity test data sheet for first two years of permit) is not included in this submission as this page is not required at this time.

I can be reached at (860) 757-7721 or dbodendorf@ctmira.org if you have any questions about these SMRs.

Sincerely,

David M. Bodendorf, P.E.
Manager of Engineering, Construction, and Power Assets

Enc: 2023-2024 Semi Annual and Annual SMRs: Outfalls 006, 007, 009

C: File: MIRA DA Environmental File

MIRA
Dissolution Authority
300 Maxim Road, Hartford, Connecticut 06114
Telephone (860) 757-7700 Fax (860) 757-7725

Attachment #1
SMRs Associated with 9/26/2024 Semi-Annual Monitoring Event
Outfalls 006, 007, 009

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective 10/1/2011

Stormwater Monitoring Report Form

Section C - Refuse Systems

Facility Information

Permittee Name: **MIRA Dissolution Authority** Site Name: **Mid-CT Resource Recovery Facility**
Mailing Address: **300 Maxim Road, Hartford, CT 06114**
Contact Person: **David M. Bodendorf** Title: **Mgr. Eng., Const. and Power Assets**
Business Phone: **(860) 757-7721** ext. E-mail: **dbodendorf@ctmira.org**
Site Address: **300 Maxim Road, Hartford, CT**
Receiving Water (name, basin): **Connecticut River**
Permit #: *GSI* **000118** Primary SIC: **4953**
Discharges into an Impaired Waterbody: Yes ☑ No ☐ yes, complete the table on page 3 of this form)

Sampling Information

Sample Location: **DSN-006** Person Collecting Sample: M. Acri
Date/Time Collected: **9/26/2024 11:55** Date of Previous Storm Event: 9/8/2024
This report is for samples required: Semi-annually ☑ **nnually** ☐ **Other**
Check here if the sample contains **snow or ice melt**: ☐
Check here if a benchmark exceedance is solely due to background or off site sources ☐ see note below

Monitoring Results

Parameter	Required Frequency	Results (units)	Benchmark	Effluent Llimit	Benchmark Exceedance (see pg 4)	Test Method	Laboratory Name
Oil & Grease	Semi-annual	**NA** mg/l	5.0 mg/l	n/a	☐		
Rainfall pH	Semi-annual	**NA**	n/a	n/a	☐		
Sample pH	Semi-annual	**NA**	5-9 SU	*	☐		
COD	Semi-annual	**3** mg/l	75 mg/L	n/a	☐	SM522C-11	ACT
TSS	Semi-annual	**NA** mg/l	90 mg/L	*	☐		
TP	Semi-annual	**NA** mg/l	0.40 mg/L	n/a	☐	SM4500PE-11	ACT
TKN	Semi-annual	**0.71** mg/l	2.3 mg/L	n/a	☐	E351.1	ACT
NO_3-N	Semi-annual	**NA**	1.10 mg/l	n/a	☐		
Total Copper	Semi-annual	**NA**	0.059 mg/l	n/a	☐		
Total Zinc	Semi-annual	**0.96** mg/l	0.160 mg/L	*	☑	E200.7	ACT
Total Lead	Semi-annual	**NA**	0.076 mg/L	n/a	☐		
24 Hr. LC_{50}	Annual-Year 1&2		n/a	n/a			
48 Hr. LC_{50}	Annual-Year 1&2		n/a	n/a			

*** See Additional Sector C Monitoring Section on page 3 of this form.**

Exemptions

List here any parameters that will not be sampled for the remainder of the permit term: see note below
Oil & Grease, Rainfall pH, Sample pH, TSS, Nitrate-N, Total Copper, Total Lead, Phosporous, COD

Note: Complete the "Data Tracking Table" (page 4 on this form) to show the parameter is eligible for the monitoring

Additional Monitoring: Sector C - Landfills and Solid Waste Disposal Areas Only

Parameter	Frequency	Results (units)	Benchmark	Effluent Limit	Benchmark Exceedance (see page4)	Test Method	Laboratory Name
Total Iron	Quarterly		1 mg/L	n/a	☐		
Effluent Samples*							
BOD	Anually for the entire permit term		n/a	140 mg/L	☐		
TSS	Anually for the entire permit term		n/a	88 mg/L	☐		
Ammonia	Anually for the entire permit term		n/a	10 mg/L	☐		
a-Terpineol	Anually for the entire permit term		n/a	0.033 mg/L	☐		
Benzoic Acid	Anually for the entire permit term		n/a	0.12 mg/L	☐		
p-Cresol	Anually for the entire permit term		n/a	0.025 mg/L	☐		
Phenol	Anually for the entire permit term		n/a	0.026 mg/L	☐		
Total Zinc	Anually for the entire permit term		n/a	0.200 mg/L	☐		
Sample pH	Anually for the entire permit term		n/a	6-9 mg/L	☐		

* Additional samples may be taken at the same time as one of the semi-annual samples for the general sampling parameters. An effluent limit applies to any single sample (not average of 4).

Additonal Monitoring for Discharges to Impaired Waters (if applicable)

Parameter	Required Frequency	Results (units)	Test Method	Laboratory Name
E. Coli	Annual		SM 9223B-04	ACT

Statement of Certification

" I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

Signature of Permitte	12/19/24 Date
David M. Bodendorf Name of Permitte (print or type)	**Manager Eng. Const. and Power Assets** Title (if applicable)
Signiture or Preparer (if different than above)	Date
Name of Preparer (print or type)	Title (if applicable)

Please send all completed forms to:

WATER TOXICS PROGRAM COORDINATOR
BUREAU OF WATER PROTECTION AND LAND REUSE
CT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective 10/1/2011

Data Tracking Sheet

Section C - Refuse Systems

Permitte Name: MIRA Dissolution Authority Permit #: GSI 00118

Site Name: Mid-CT Resource Recovery Facility (WPF)

Site Address: 300 Maxim Road, Hartford, CT 06114

Sample Location: Outfall 006

Enter the sample dates and the data reported for the four (4) most recent semi-annual or quarterly monitoring sample results at this discharge location in the chart below. To determine the average for the four samples add up each of the four results and then divide that number by 4. ***Only monitoring collected under the current permit (effective 10/1/11,) can be used to earn the monitoring exemption.***

Average = $\frac{\text{(Sample 1+ Sample 2 + Sample 3 + Sample 4)}}{4}$

	Sample Result						
Parameter	1	2	3	4	Average	Benchmark**	Qualify for Exemption?
Sample Date	11/30/2022	8/15/2023	12/28/2023	9/26/2024			
O&G	NA	NA	NA	NA	Exempt	5.0 mg/L	Yes
Sample pH*	NA	NA	NA	NA	Exempt	5-9 S.U.	Yes
COD	10	33	<2.0	3	12	75 mg/L	Yes
TSS*	NA	NA	NA	NA	Exempt	90 mg/L	Yes
TP	0.09	0.19	0.02	NA	0.10	0.4 mg/L	Yes
TKN	0.87	0.52	8.96	0.71	2.77	2.30 mg/L	No
NO_3-N	NA	NA	NA	NA	Exempt	1.10 mg/L	Yes
Total Copper	NA	NA	NA	NA	Exempt	0.059 mg/L	Yes
Total Zinc*	0.410	0.320	0.080	0.960	0.443	0.16 mg/L	No
Total Lead	NA	NA	NA	NA	Exempt	0.076 mg/L	Yes
Total Iron	--	--	--	--	--	1.0 mg/L	--

**If the average of the four (4) most recent samples is less than the benchmark listed, your facility is no longer required to sample semi-annually or quarterly for that parameter for the rest of the permit (current permit expires 9/30/2016).

If the average of the four (4) most resent samples is equal to or greater than the benchmark listed, check the appropriate box on page 1.If so, you have exceeded the benchmark and must continue to sample this parameter semiannually until the average is below the benchmark. See Section 5(e)(1)(B) of the General permit for requirements when exceeding a benchmark.

If the sample result reported by the testing laboratory was below detection limit, for the purpose of averaging, use a value that is ½ the detection limit for that parameter in the formula above. For example, if the result for Oil & Grease was <2.0 mg/L, use a value of 1.0 mg/L for determining the average. Please refer to Section 5 e(1)B(iii) for a more detailed explanation.

*Due to effluent limits, landfills and solid waste disposal areas within Sector C are required to monitor annually for nine parameters including sample pH, TSS and Zinc for the entire permit term. The pH of uncontaminated rainfall is also recommended to provide background information. See additional monitoring for landfills and solid waste disposal areas

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective 10/1/2011

Facility Information

Permittee Name: **MIRA Dissolution Authority** **Site Name: Mid-CT Resource Recovery Facility**
Mailing Address: **300 Maxim Road, Hartford, CT 06114**
Contact Person: **David M. Bodendorf** Title: **Manager Eng., Const. and Power Assets**
Business Phone: **(860) 757-7721** ext. E-mail: **dbodendorf@ctmira.org**
Site Address: **300 Maxim Road, Hartford, CT**
Receiving Water (name, basin): **Connecticut River**
Permit #: *GSI* **000118** Primary SIC: **4953**
Discharges into an Impaired Waterbody: Yes ☑ No ☐ If yes, complete the table on page 3 of this form)

Sampling Information

Sample Location: **DSN-007** Person Collecting Sample: M. Acri
Date/Time Collected: **NA No Discharge** **Date of Previous Storm Event:** **9/8/2024**
This report is for samples required: Semi-annually ☑ Annually ☐ Other
Check here if the sample contains **snow or ice melt**: ☐
Check here if a benchmark exceedance is solely due to background or off site sources ☐ see note below

Monitoring Results

Parameter	Required Frequency	Results (units)	Benchmark	Effluent Llimit	Benchmark Exceedance (see pg 4)	Test Method	Laboratory Name
Oil & Grease	Semi-annual	**NA** mg/l	5.0 mg/l	n/a	☐	EPA1664	ACT
Rainfall pH	Semi-annual	**NA**	n/a	n/a			
Sample pH	Semi-annual	**NA**	5-9 SU	*	☐		
COD	Semi-annual	**NA** mg/l	75 mg/L	n/a	☐	SM5220C-11	ACT
TSS	Semi-annual	**NA** mg/l	90 mg/L	*	☐		
TP	Semi-annual	**NA** mg/l	0.40 mg/L	n/a	☐	SM4500PE-11	ACT
TKN	Semi-annual	**NA** mg/l	2.3 mg/L	n/a	☐	E351.1	ACT
NO_3-N	Semi-annual	**NA**	1.10 mg/l	n/a	☐		
Total Copper	Semi-annual	**NA**	0.059 mg/l	n/a	☐		
Total Zinc	Semi-annual	**NA** mg/l	0.160 mg/L	*	☐	E200.7	ACT
Total Lead	Semi-annual	**NA**	0.076 mg/L	n/a	☐		
24 Hr. LC_{50}	Annual-Year 1&2		n/a	n/a			
48 Hr. LC_{50}	Annual-Year 1&2		n/a	n/a			

*** See Additional Sector C Monitoring Section on page 3 of this form.**

Exemptions

List here any parameters that will not be sampled for the remainder of the permit term: see note below
Rainfall pH, Sample pH, Nitrate-N, Total Copper, Total Lead, TSS, COD

Note: Complete the "Data Tracking Table" (page 4 on this form) to show the parameter is eligible for the monitoring exception in Section 5(e)(1)(B)(iii) of the general permit. If you are discontinuing monitoring for the impaired water parameters (per Section 5(e)(1)(D)), or parameters that are present due to natural or background levels of off-site run-on (per Section 5(e)(1)(B)(V)), attach additonial supporting information to this form.

Additional Monitoring: Sector C - Landfills and Solid Waste Disposal Areas Only

Parameter	Frequency	Results (units)	Benchmark	Effluent Limit	Benchmark Exceedance (see page4)	Test Method	Laboratory Name
Total Iron	Quarterly		1 mg/L	n/a	☐		
Effluent Samples*							
BOD	Anually for the entire permit term		n/a	140 mg/L	☐		
TSS	Anually for the entire permit term		n/a	88 mg/L	☐		
Ammonia	Anually for the entire permit term		n/a	10 mg/L	☐		
a-Terpineol	Anually for the entire permit term		n/a	0.033 mg/L	☐		
Benzoic Acid	Anually for the entire permit term		n/a	0.12 mg/L	☐		
p-Cresol	Anually for the entire permit term		n/a	0.025 mg/L	☐		
Phenol	Anually for the entire permit term		n/a	0.026 mg/L	☐		
Total Zinc	Anually for the entire permit term		n/a	0.200 mg/L	☐		
Sample pH	Anually for the entire permit term		n/a	6-9 mg/L	☐		

* Additional samples may be taken at the same time as one of the semi-annual samples for the general sampling parameters. An effluent limit applies to any single sample (not average of 4).

Additonal Monitoring for Discharges to Impaired Waters (if applicable)

Parameter	Required Frequency	Results (units)	Test Method	Laboratory Name
E Coli	Annual		SM 9223B-04	ACT

Statement of Certification

" I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

Signature of Permitte	12/19/24 Date
David M. Bodendorf Name of Permitte (print or type)	**Manager Eng., Const. and Power Assets** Title (if applicable)
Signiture or Preparer (if different than above)	Date
Name of Preparer (print or type)	Title (if applicable)

Please send all completed forms to:

WATER TOXICS PROGRAM COORDINATOR
BUREAU OF WATER PROTECTION AND LAND REUSE
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79 ELM STREET
HARTFORD, CT 06106-5127

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective 10/1/2011

Data Tracking Sheet

Section C - Refuse Systems

Permitte Name: MIRA Dissolution Authority	Permit #: GSI 00118
Site Name: Mid-CT Resource Recovery Facility (WPF)	
Site Address: 300 Maxim Road, Hartford, CT 06114	
Sample Location: Outfall 007	

Enter the sample dates and the data reported for the four (4) most recent semi-annual or quarterly monitoring sample results at this discharge location in the chart below. To determine the average for the four samples add up each of the four results and then divide that number by 4. ***Only monitoring collected under the current permit (effective 10/1/11,) can be used to earn the monitoring exemption.***

Average = $\frac{\text{(Sample 1+ Sample 2 + Sample 3 + Sample 4)}}{4}$

	Sample Result						
Parameter	1	2	3	4	Average	Benchmark**	Qualify for Exemption?
Sample Date	11/30/2022	8/15/2023	12/28/2023	9/26/2024			
O&G	1	1.97	NA	NA	1.49	5.0 mg/L	Yes
Sample pH*	NA	NA	NA	NA	NA	5-9 S.U.	Yes
COD	10	27.00	26	NA	21.00	75 mg/L	YES
TSS*	NA	NA	NA	NA	NA	90 mg/L	Yes
TP	0.087	0.32	NA	NA	0.205	0.4 mg/L	Yes
TKN	0.83	0.75	11.59	NA	4.39	2.30 mg/L	No
NO_3-N	NA	NA	NA	NA	NA	1.10 mg/L	Yes
Total Copper	NA	NA	NA	NA	NA	0.059 mg/L	Yes
Total Zinc*	0.32	0.82	0.160	NA	0.43	0.16 mg/L	No
Total Lead	NA	NA	NA	NA	NA	0.076 mg/L	Yes
Total Iron		--	--	--	--	1.0 mg/L	--

**If the average of the four (4) most recent samples is less than the benchmark listed, your facility is no longer required to sample semi-annually or quarterly for that parameter for the rest of the permit (current permit expires 9/30/2016).

If the average of the four (4) most resent samples is equal to or greater than the benchmark listed, check the appropriate box on page 1.If so, you have exceeded the benchmark and must continue to sample this parameter semiannually until the average is below the benchmark. See Section 5(e)(1)(B) of the General permit for requirements when exceeding a benchmark.

If the sample result reported by the testing laboratory was below detection limit, for the purpose of averaging, use a value that is ½ the detection limit for that parameter in the formula above. For example, if the result for Oil & Grease was <2.0 mg/L, use a value of 1.0 mg/L for determining the average. Please refer to Section 5 e(1)B(iii) for a more detailed explanation.

*Due to effluent limits, landfills and solid waste disposal areas within Sector C are required to monitor annually for nine parameters including sample pH, TSS and Zinc for the entire permit term. The pH of uncontaminated rainfall is also recommended to provide background information. See additional monitoring for landfills and solid waste disposal areas

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective

Facility Information

Permittee Name: **MIRA Dissolution Authority** Site Name: **Mid-CT Power Block Facility**
Mailing Address: **300 Maxim Road, Hartford, CT 06114**
Contact Person: **David M. Bodendorf** Title: **Manager Eng., Const. and Power Assets**
Business Phone: **(860) 757-7721** ext. E-mail: **dbodendorf@ctmira.org**
Site Address: **Gate 20, Reserve Road, Hartford, CT**
Receiving Water (name, basin): **Connecticut River**
Permit #: *GSI* **000118** Primary SIC: **4953**
Discharges into an Impaired Waterbody: Yes ☑ No ☐ (If yes, complete the table on page 3 of this form)

Sampling Information

Sample Location: **DSN-009** Person Collecting Sample: M. Acri
Date/Time Collected: **9/26/2024 11:40** Date of Previous Storm Event: 9/8/2024
This report is for samples required: Semi-annually ☑ Annually ☐ Other
Check here if the sample contains **snow or ice melt**: ☐
Check here if a benchmark exceedance is solely due to background or off site sources ☐ see note below

Monitoring Results

Parameter	Required Frequency	Results (units)		Benchmark	Effluent Llimit	Benchmark Exceedance (see pg 4)	Test Method	Laboratory Name
Oil & Grease	Semi-annual	**NA**	mg/l	5.0 mg/l	n/a	☐		
Rainfall pH	Semi-annual	**NA**	S.U.	n/a	n/a			
Sample pH	Semi-annual	**NA**	S.U.	5-9 SU	*	☐		
COD	Semi-annual	**NA**	mg/l	75 mg/L	n/a	☐		
TSS	Semi-annual	**NA**	mg/l	90 mg/L	*	☐		
TP	Semi-annual	**NA**	mg/l	0.40 mg/L	n/a	☐		
TKN	Semi-annual	**NA**	mg/l	2.3 mg/L	n/a	☐		
NO_3-N	Semi-annual	**NA**	mg/l	1.10 mg/l	n/a	☐		
Total Copper	Semi-annual	**NA**	mg/l	0.059 mg/l	n/a	☐		
Total Zinc	Semi-annual	**0.580**	mg/l	0.160 mg/L	*	☑	E200.7	Phoenix
Total Lead	Semi-annual	**NA**	mg/l	0.076 mg/L	n/a	☐		
24 Hr. LC_{50}	Annual-Year 1&2	**N/A**		n/a	n/a			
48 Hr. LC_{50}	Annual-Year 1&2	**N/A**		n/a	n/a			

*** See Additional Sector C Monitoring Section on page 3 of this form.**

Exemptions

List here any parameters that will not be sampled for the remainder of the permit term: see note below
Oil & Grease, Rainfall pH, Sample pH, COD, TSS, TP, TKN, Nitrate-N, Total Copper, Total Lead

Note: Complete the "Data Tracking Table" (page 4 on this form) to show the parameter is eligible for the monitoring exception in Section 5(e)(1)(B)(iii) of the general permit. If you are discontinuing monitoring for the impaired water parameters (per Section 5(e)(1)(D)), or parameters that are present due to natural or background levels of off-site run-on (per Section 5(e)(1)(B)(V)), attach additonial supporting information to this form.

Additional Monitoring: Sector C - Landfills and Solid Waste Disposal Areas Only

Parameter	Frequency	Results (units)	Benchmark	Effluent Limit	Benchmark Exceedance (see page4)	Test Method	Laboratory Name
Total Iron	Quarterly		1 mg/L	n/a	☐		
Effluent Samples*							
BOD	Anually for the entire permit term		n/a	140 mg/L	☐		
TSS	Anually for the entire permit term		n/a	88 mg/L	☐		
Ammonia	Anually for the entire permit term		n/a	10 mg/L	☐		
a-Terpineol	Anually for the entire permit term		n/a	0.033 mg/L	☐		
Benzoic Acid	Anually for the entire permit term		n/a	0.12 mg/L	☐		
p-Cresol	Anually for the entire permit term		n/a	0.025 mg/L	☐		
Phenol	Anually for the entire permit term		n/a	0.026 mg/L	☐		
Total Zinc	Anually for the entire permit term		n/a	0.200 mg/L	☐		
Sample pH	Anually for the entire permit term		n/a	6-9 mg/L	☐		

* Additional samples may be taken at the same time as one of the semi-annual samples for the general sampling parameters. An effluent limit applies to any single sample (not average of 4).

Additonal Monitoring for Discharges to Impaired Waters (if applicable)

Parameter	Required Frequency	Results (units)	Test Method	Laboratory Name
Mercury	**Annual**	**mg/L**	**E245.1**	**Phoenix**
E. Coli	**Annual**		**SM 9223B-04**	**Phoenix**

Statement of Certification

" I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement in the submitted information may be punishable as a criminal offense, in accordance with section 22a-6 of the General Statutes, pursuant to section 53a-157b of the General Statutes, and in accordance with any other applicable statute.

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79 ELM STREET
HARTFORD, CT 06106-5127

General Permit for the Discharge of Stormwater Associated with Industrial Activity, effective 10/1/2011

Data Tracking Sheet

Section C - Refuse Systems

Permitte Name: MIRA Dissolution Authority Permit #: GSI 00118

Site Name: Mid Connecticut Power Block Facility

Site Address: Gate 20, Reserve Road, Hartford, CT

Sample Location: Outfall 009

Enter the sample dates and the data reported for the four (4) most recent semi-annual or quarterly monitoring sample results at this discharge location in the chart below. To determine the average for the four samples add up each of the four results and then divide that number by 4. ***Only monitoring collected under the current permit (effective 10/1/11,) can be used to earn the monitoring exemption.***

Average = $\frac{\text{(Sample 1+ Sample 2 + Sample 3 + Sample 4)}}{4}$

Note: Parameter Evaluation (over 4 semi-annual events) begins with Q4 (Oct-Dec 2012) sampling under new management as of 7/01/2012.

	Sample Result						
Parameter	1	2	3	4	Average	Benchmark**	Qualify for Exemption?
Sample Date	11/30/2022	8/15/2023	12/28/2023	9/26/2024			
O&G						5.0 mg/L	Yes
Sample pH*						5-9 S.U.	Yes
COD						75 mg/L	Yes
TSS*						90 mg/L	Yes
TP						0.4 mg/L	Yes
TKN						2.30 mg/L	Yes
NO_3-N						1.10 mg/L	Yes
Total Copper						0.059 mg/L	Yes
Total Zinc*	0.230	0.270	0.170	0.580	0.313	0.16 mg/L	No
Total Lead						0.076 mg/L	Yes
Total Iron	--	--	--	--	--	1.0 mg/L	N/A

**If the average of the four (4) most recent samples is less than the benchmark listed, your facility is no longer required to sample semi-annually or quarterly for that parameter for the rest of the permit (current permit expires 9/30/2016).

If the average of the four (4) most resent samples is equal to or greater than the benchmark listed, check the appropriate box on page 1.If so, you have exceeded the benchmark and must continue to sample this parameter semiannually until the average is below the benchmark. See Section 5(e)(1)(B) of the General permit for requirements when exceeding a benchmark.

If the sample result reported by the testing laboratory was below detection limit, for the purpose of averaging, use a value that is ½ the detection limit for that parameter in the formula above. For example, if the result for Oil & Grease was <2.0 mg/L, use a value of 1.0 mg/L for determining the average. Please refer to Section 5 e(1)B(iii) for a more detailed explanation.

*Due to effluent limits, landfills and solid waste disposal areas within Sector C are required to monitor annually for nine parameters including sample pH, TSS and Zinc for the entire permit term. The pH of uncontaminated rainfall is also recommended to provide background information. See additional monitoring for landfills and solid waste disposal areas

Example Visual Monitoring Report

Quarterly Visual Monitoring Report Form

20240902 78-1

Outfall No: Hartford MIRA 006 Quarter: 1st 2nd 3rd 4th Year: 2023/24

Date/Time Collected: 9/26/24 11:55 Date/Time Examined: 9/26/24 11:56

Rainfall Amount: 0.11in Qualifying Storm? Yes No

Runoff Source: Rainfall Snowmelt

Examiner (print): M. Acri Examiner (sign): [signature]

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the stormwater appear to be colored? YES NO	Describe:
Odor	Does the sample have an odor? YES NO	Describe:
Clarity	Is the stormwater clear or transparent? YES NO	Which best describes the clarity? CLEAR MILKY OPAQUE
Floating Solids	Is something floating on the surface of the sample? YES NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? YES NO	Describe:
Suspended Solids	Is something suspended in the sample's water column? YES NO	Describe: Debris
Foam	Is there foam or material forming on the top of the sample surface? YES NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? YES NO	Which bests describes the sheen? Rainbow Sheen Floating oil globules Describe:
Other Obvious Indicators of Pollution		Describe:

Based on the conditions observed above, is there the potential that the facility's current control measures are inadequate or require maintenance?

CORRECTIVE ACTIONS TAKEN

RETAIN THIS FORM WITH SPPP FOR THE PERMIT TERM

ACT# 20241002460-1

Quarterly Visual Monitoring Report Form

Outfall No: Hartford MIRA 007 Quarter: 1st 2nd 3rd 4th Year: 2023/24

Date/Time Collected: _____ Date/Time Examined: 9/26/24 12:00

Rainfall Amount: _____ Qualifying Storm? Yes No

Runoff Source: Rainfall Snowmelt

Examiner (print): M. Acri Examiner (sign): _____

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the stormwater appear to be colored? YES NO	Describe:
Odor	Does the sample have an odor? YES NO	Describe:
Clarity	Is the stormwater clear or transparent? YES NO	Which best describes the clarity? CLEAR MILKY OPAQUE
Floating Solids	Is something floating on the surface of the sample? YES NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? YES NO	Describe:
Suspended Solids	Is something suspended in the sample's water column? YES NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? YES NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? YES NO	Which bests describes the sheen? Rainbow Sheen Floating oil globules Describe:
Other Obvious Indicators of Pollution		Describe:

Comments

Outfall Dry

CORRECTIVE ACTIONS TAKEN

RETAIN THIS FORM WITH SPPP FOR THE PERMIT TERM

Quarterly Visual Monitoring Report Form

202409 0278 - 1

Outfall No: Hartford MIRA 009 Quarter: 1st 2nd 3rd 4th Year: 2023/24

Date/Time Collected: 9/26/24 11:40 Date/Time Examined: 9/26/24 11:41

Rainfall Amount: 0.11in Qualifying Storm? Yes No

Runoff Source: Rainfall Snowmelt

Examiner (print): M. Acri Examiner (sign):

PARAMETER	OBSERVATION	CHARACTERISTICS
Color	Does the stormwater appear to be colored? YES NO	Describe:
Odor	Does the sample have an odor? YES NO	Describe:
Clarity	Is the stormwater clear or transparent? YES NO	Which best describes the clarity? CLEAR MILKY OPAQUE
Floating Solids	Is something floating on the surface of the sample? YES NO	Describe:
Settled Solids	Is something settled on the bottom of the sample? YES NO	Describe:
Suspended Solids	Is something suspended in the sample's water column? YES NO	Describe:
Foam	Is there foam or material forming on the top of the sample surface? YES NO	Describe:
Oil Sheen	Can you see a rainbow effect or sheen on the surface? YES NO	Which bests describes the sheen? Rainbow Sheen Floating oil globules Describe:
Other Obvious Indicators of Pollution		Describe:

Based on the conditions observed above, is there the potential that the facility's current control measures are inadequate or require maintenance?

CORRECTIVE ACTIONS TAKEN

RETAIN THIS FORM WITH SPPP FOR THE PERMIT TERM

Example Semi Annual Inspection Report

FUSS & O'NEILL

Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

Inspector Name: **D. Bodendorf** Title: **Mngr, Eng., Const., Power Assets.**
Inspection Date: **February 4, 2025** Time: **10:45**
Weather at Time of Inspection: **Sunny with snow melt/40°F**
Time Since Last Rainfall: **NA**
**U.S Dept. of Commerce NOAA (Hartford Brainard Field) w.underground.com*
Semi-Annual Event: CY2025 ☒ **1st** or ☐ **2nd**

Items reviewed prior to Visual Inspection:
NA Previous Monthly Inspection Forms
☒ Previous Visual Stormwater Monitoring Report Forms
☒ Previous Analytical Stormwater Monitoring Report
☒ Stormwater System Maintenance Records
☒ Spill Reports/Incident Records (>5-gal) **(None)**

Scope: This Form outlines and details visual observations made in areas with the potential for pollutants to enter the stormwater drainage system. Descriptions of unacceptable conditions and corrective actions to remediate the pollutant source are provided.

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
1	Detention Basin	• Light vegetative cover conditions • Surficial oil sheen or floatables • Visual water quality(color/turbidity)	✓ ✓ ✓		Basin is open in the center with visible water surface, surrounded by phragmites on the perimeter.	
2	Discharge Outfalls to Detention Basin (005,006,007)	• Free Flowing • Debris or sheen/oil • Turbidity/Discoloration • Signs of erosion	✓ ✓ ✓ ✓			
3	Grease / Oil Separator (upstream outfall 006)	• Thickness of grease oil accumulation • Thickness of solids at bottom of tank	✓ ✓		MH cover removals not accessible without proper tools	Site operations suspended.
4	Sedimentation Chamber (upstream outfall 006) & Manhole structure	• Thickness of solids in sump • Free of floating debris & oil	✓ ✓		MH cover removals not accessible without proper tools	Site operations suspended.

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MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
5	Drainage Structures (catch basins, manholes)	• Clear of oil sheen or floatables • No excessive sediment build-up remove if sump > ½ full • Free-flowing condition/grates open	--- --- ✓	--- ---		
6	Paved Surfaces (MSW Delivery, Trucks, Equipment Access, Trailer Staging Area)	• Clear of loose debris • Clear of particulate buildup • Clear of staining	✓ ✓ ✓			
7	Sweeper	• Sweeper is operable/used as needed • Debris from collection pan is not outside	NA ✓		Site operations suspended	
8	MSW Delivery Vehicles: Scale to tip floor entrance and exit	• Maintaining cover until inside • Leakage of truck/trailer residue (inbound) • Leakage from hydraulic hoses • Staining under vehicle • Tracking debris upon exit • Truck dripping leachate upon exit (outbound) • Spill Kits – present & stocked	✓ ✓ ✓ ✓ ✓ ✓ ✓		See Notes	

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Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
9	Trailer Loading Area – Non-processibles (East)	• Alignment under covered loadout • Leakage of trailer or hydraulic hoses • Covered if staged beyond covered loadout • Debris on pavement • Terminator shredder area clean no leaks	✓ ✓ ✓ ✓ ✓			
10	Filled Trailer Staging Area (West) - of processing residues: • Ferrous metal • Other	• Leakage of trailer or hydraulic hoses • Trailers not overfilled • Trailers not covered upon filling with material.	✓ ✓ ✓			
11	Front End Loader Equipment; North O/H door – tip floor West O/H door RDF	• Leakage of hydraulic hoses • Tracking of MSW from tip floor • Tracking of RDF from top floor	✓ ✓ ✓		See notes	
12	Exterior Equipment / Materials Storage along North Wall of MSW tip floor	• Check equipment staged this area • Check Rolloffs staged this area • Check Materials staged in this area	✓ ✓ ✓			
13	Empty Trailers - staged for filling – West Side RDF	• Leakage of trailer residue • Hydraulic hoses • Covers on trailer	✓ ✓ NA			

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Stormwater Pollution Prevention Plan
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No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
14	Primary Shredder Baghouse	• Baghouse dust collector fabric tents are intact	✓			
15	Roof Vents Roof Surface Exterior Walls	• Operable vents – adjacent roof area checked for particulates • Roof surface free of particulate • Exterior wall surfaces free of particulate	✓ ✓ ✓		Did not access roof on this site visit. Exterior walls with 'black' particulate staining	
16	Birds	• Operating bird deterrence system (USDA managed system) • Notable level of bird presence/activity controlled	NA ✓		Operations suspended	
17	Diesel Fuel AST-5,000-gal - Tank Fill - Dispenser Use (via card reader system (West Side – WPF)	• Signs of Spillage / Stains at AST dispenser • Tank and Hose Integrity • Veeder Root ATG functional • Check operability of valve in stormwater conveyance system in secondary containment pad • Locked AST fill port cap	✓ ✓ ✓ ✓ ✓			
18	Transformer containing oil (West Side – near AST)	• Inspect for oil leakage • Exterior in good condition	✓ ✓			

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
19	Used oil absorbent pads, PPE, speedi-dry, etc. – in covered container (West Side – WPF)	• Integrity of container • Signs of Spillage / Stains • Closed from rainfall secured in place	NA			
20	Gas Cylinders (O_2 & Acetylene) (West Side – RDF wall) Note: Propane tanks in cages	• Covered from direct rainfall • Secured in a not readily accessible area	✓ ✓		Located in a locked cage at NW corner of paved area- only a few cylinders present – two cylinders not in enclosure.	
21	Vehicle / Equipment Maintenance Shop Area (at O/H door - West Side)	Petroleum Products and Solvents: • Stored on secondary containment • Container integrity • Signs of spillage / Stains • Spill Kits – present & stocked • Collection containers(s) for used oil pad/boom absorbents • Collection containers(s) for used granular oil absorbents	 ✓ ✓ ✓ ✓ ✓ ✓			
22	Used Equipment Parts – exterior staged for disposal: (North and West sides of WPF)	• Abandoned heavy equipment • Roll offs are not leaking • Materials on pavement are free of debris and non-rusting, or covered	✓ ✓		Abandoned equipment was removed in July 2024 as scrap steel.	

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
23	Transformers (North Side)	• Inspect for oil leakage • Exterior in good condition	✓ ✓			
24	Rat Bait Boxes – Perimeter of WPF	• Boxes not-damaged • Locations are away from traffic lanes	✓ ✓			
25	Spill Control/Clean Up Materials	• Accessible storage locations • Spill Kits strategically placed in areas of potential pollutants • Adequate supply of absorbent material in spill kits	✓ ✓ ✓			
	Additional Notes or Comments: ***Waste Processing Facility operations ceased on July 19, 2022. Current site activity is limited to security personnel and approximately 11 MDA employees with offices in the administration building NAES employees operated the Jet Turbine Facility through May 2023 and all NAES employees exited the site by June 30, 2023. All remaining operable heavy equipment was auctioned in August 2024 and removed from the site in early September 2024. See photos on following pages for more information.***					

The Stormwater Plan WILL / WILL NOT (circle one) be revised based upon observations and/or corrective actions related to this inspection.
(If yes, note the revision in Appendix H of the Plan.)

Report Prepared By: David Bodendorf Title: Mgr. Eng., Const., Power Assets, MDA

Signature: Date: 2/4/2025

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT



East side of WPF Maintenance Shop



Overhead RDF conveyors north of RDF hall



West side RDF Hall along dike



Non-processible loadout area west side WPF

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
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MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT


Manuevering hall looking north


Catch basin near SW corner of maneuvering hall


Westerly site entrance along Maxim Rd.


Maneuvering area west of RDF hall

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
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MDA Mid-CT Waste Processing Facility
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Manuevering area west of waste processing building



1500 gallon diesel fuel tank



transformers



Maneuvering area west of RDF hall, north of maneuvering hall

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Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT



Ash Scale south of coal pond



Easterly Access Road along dike



Access Road south of coal pond



RDF Conveyor looking north

Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Power Block Facility
1 Reserve Road, Hartford, CT

Inspector Name: **D. Bodendorf** Title: **Mngr, Eng., Const., Power Prod.**
Inspection Date: **February 4, 2025** Time: **10:15**
Weather at Time of Inspection: **Sunny with snow melt/42°F**
Time Since Last Rainfall: NA
**U.S Dept. of Commerce NOAA (Hartford Brainard Field) w.underground.com*
Semi-Annual Event: CY 2025 ☒ **1st** or ☐ **2nd**

Items reviewed prior to Visual Inspection:
NA Previous Monthly Inspection Forms
☒ Previous Visual Stormwater Monitoring Report Forms
☒ Previous Analytical Stormwater Monitoring Report
☒ Stormwater System Maintenance Records
☒ Spill Reports/Incident Records (>5-gal) **(None)**

Scope: This Form outlines and details visual observations made in areas with the potential for pollutants to enter the stormwater drainage system. Descriptions of unacceptable conditions and corrective actions to remediate the pollutant source are provided.

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
1	Drainage Structures (catch basins, manholes)	• Clear of oil sheen or floatables • No excessive sediment build-up • Free-flowing condition/grates open	√ √ √		CBs on riverside of building drain to outfall to CT River. (Majority of site drains to coal pond; currently discharged to sanitary sewer)	
2	Paved Surfaces (Parking Lot, Trucks, Equipment Access, Trailer Staging Area) Lime (powdered) silo in watershed of DSN 009	• Clear of particulate buildup/ staining • Sweeper is operable/used as needed • Clear of bird droppings • No tracking of lime powder to adjacent watershed (ensure seams are tight)	√ √ √ √			
3	Gravel Surfaces (Parking Lot, Trucks, Equipment Access, Trailer Staging Area)	• Consistent gravel surface cover • Clear of surface debris • Catch Basin in area clear of gravel	√ √ √			

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Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Power Block Facility
1 Reserve Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
4	Electric Generating Facility (EGF) Roof Area	• Roof drains clear of debris/sediment/paint chips • Roof mats in proper location/good condition • Painted steel vents in good condition • Painted aluminum vents in good condition • No excessive paint chipping • Oil absorbent sock condition o No. 5 basin o No. 6 basin • "Seal oil vents" signs of a sheen	√ √ √ √ √ √ √		Did not visit roof.	Roof surface cleaned July 2021, with restoration and re-attachment of mats more recently – to cover metal surfaces.
5	Open storage shed structure for metal pieces under roof cover	• Shed exterior in good condition • Metal pieces arranged for cover from direct rainfall • Metal pieces on shelf supports (off ground)	√ √ √			
6	Rat Bait Boxes – Perimeter of PBF	• Boxes not-damaged • Locations are away from traffic lanes	√ √			
7	Spill Control Clean Up Kit Materials Storage	• Spill kit in accessible storage locations for parking and roof areas • Adequate supply of material in spill kits	√ √			

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Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Power Block Facility
1 Reserve Road, Hartford, CT

No.	Area Checked	Stormwater Pollution Control Measures Checked	Conditions Acceptable?		Describe Unacceptable Conditions	Describe Follow-up Actions (Incl. Dates & Times)
			Y	N		
8	Used oil absorbent pads, PPE, granular absorbent, etc. – in covered container	• Integrity of tank container • Signs of Spillage / Stains • Closed and Secured	√ √ √			
	Additional Notes or Comments: ***Power Block Generation operations ceased on July 19, 2022. Current site activity is limited to security personnel. NAES employees exited the site on June 30, 2023. MDA employee offices located in administration building on WPF side of the site. Several items of scrap metal were removed from the site in July 2024.***					

The Stormwater Plan WILL / WILL NOT (circle one) be revised based upon observations and/or corrective actions related to this inspection.
(If yes, note the revision in Appendix H of the Plan.)

Report Prepared By: David Bodendorf Title: Mgr. Eng., Const., Power Assets, MDA

Signature: Date: 2/4/2025

Semi-Annual - Comprehensive Site Compliance Evaluation (CSCE) Form
Stormwater Pollution Prevention Plan
Winter 2025
MDA Mid-CT Power Block Facility
1 Reserve Road, Hartford, CT


East Side of PBF Along Dike Wall


West Side PBF Admin Building


Catch basin north of PBF Admin Building


North Side of Turbine Hall

Example Monthly Inspection Report

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Monthly (Routine) Site Inspection Checklist
Stormwater Pollution Prevention Plan

MIRA Mid-CT Waste Processing Facility
300 Maxim Road, Hartford, CT

Date: 4/30/25 Inspector: D. Bodenlos Weather: SUN 68°

Activity / Exposed Material Status of Conditions	Acceptable Conditions		Comments
	Yes	No	
1. Loading/Unloading Areas at the facility			
▪ Free of evidence of spills or leaks	X		
▪ Free of debris accumulation	X		
2. Outdoor Petroleum Product Storage			
▪ Free of debris/staining	X		
▪ Tank (& Hose) in Good Condition	X		
3. Trailer Storage Areas – Processing Residues			
▪ Filled to appropriate Levels/side walls clean	X		
▪ Free of spills or leaks/drippage	X		
▪ Covered from rainfall/wind	X		
4. Equipment Parts (under Roof)			
▪ Rolloffs are leak proof and covered	X		
▪ Free of spills / debris around container	X		
▪ Parts of pavement free of debris/oils	X		
5. Grease/Oil Separator			
▪ Free of notable accumulations	X		
6. Catch Basins/Sedimentation Chamber			
▪ Sumps free of excessive sediment build-up	X		
▪ Open grates and free-flowing conditions	X		
7. Spill Response Equipment			
▪ Spill Kits fully stocked and ready	NA		Spill Kit Available on-site
8. Roof			
▪ Free of staining or particulates	X		

Additional Comments/Follow-up Actions: operations Suspended

PBF Operator - Supervisor Signature: [signature]

(___ Inspection summary information shared with PBF Operator)

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Monthly (Routine) Site Inspection Checklist
Stormwater Pollution Prevention Plan

MIRA Mid-CT Power Block Facility
1 Reserve Road, Hartford, CT

Date: 4/30/25 Inspector: D. Bodendorf Weather: Sun 68°

Activity / Exposed Material Status of Conditions	Acceptable Conditions		Comments
	Yes	No	
1. Loading/Unloading Areas at the facility			
▪ Free of evidence of spills or leaks	X		
▪ Free of debris accumulation	X		
2. Outdoor Petroleum Product Storage	Not Applicable		
▪ Free of debris/staining			
▪ Tank (& Hose) in Good Condition			
3. Trailer Storage Areas – Processing Residues	Not Applicable		
▪ Filled to appropriate Levels/side walls clean			
▪ Free of spills or leaks/drippage			
▪ Covered from rainfall/wind			
4. Equipment Parts – Under Covered Roof			
▪ Rolloffs are leak proof and covered	X		
▪ Free of spills / debris around container	X		
▪ Parts on pavement free of debris/oils	X		
5. Grease/Oil Separator	Not Applicable		
▪ Free of notable accumulations			
6. Catch Basins/Sedimentation Chamber			
▪ Sumps free of excessive sediment build-up	X		
▪ Open grates and free-flowing conditions	X		
7. Spill Response Equipment			
▪ Spill Kits fully stocked and ready	N/A		Speedi Dri Available on-site
8. Roof			
▪ Free of staining or particulates	X		

Additional Comments/Follow-up Actions: operations suspended

WPF Operator - Supervisor Signature: [signature]

(___ Inspection summary information shared with WPF Operator)

Water Management Operating Plan

Shuttered Resource Recovery Facility
100 Reserve Road and 300 Maxim Road
Hartford, CT 06114

1. Introduction/Background

This Water Management Operating Plan ("Plan") has been developed by the MIRA Dissolution Authority ("MIRA DA") for the Connecticut Department of Administrative Services ("DAS"). As specified in Public Act 23-170, on July 1, 2025, DAS will succeed MIRA DA as the owner of the South Meadow Station property on which the MIRA DA's shuttered Resource Recovery Facility ("RRF") is located.

There are two (2) active wastewater discharges from the RRF, both of which are directed to the sanitary sewer for further treatment at the Metropolitan District's Hartford Water Pollution Control Facility, 240 Brainard Road, Hartford. These discharges are referred to as the "80K Discharge," and the "Coal Pond Discharge." Further details regarding the 80K Discharge and the Coal Pond Discharge, such as permitting, wastewater system operations and maintenance, monitoring and reporting, are discussed below.

There is a total of three wastewater discharge permits in effect for the RRF; however, only two of these permits are active. The inactive permit, National Pollutant Discharge Elimination System (NPDES) Permit No. CT0003875, is associated with the intake and discharge of once-through non-contact cooling water from/to the Connecticut River. This Plan does not discuss operation, maintenance or monitoring of the discharges under NPDES Permit No. CT0003875, because those discharges ceased with the shuttering of the RRF. NPDES Permit No. CT0003875 remains in effect because permit closure requirements (i.e., cleaning and proper abandonment of the intake and discharge piping) have not been completed. There remains a monthly reporting obligation under NPDES Permit No. CT0003875, which is discussed in the Reporting section of this Plan.

2. Permit Summary

As noted above, there is a total of three active wastewater discharge permits in effect for the RRF. These three permits, which are further discussed below, are:

- Pretreatment Permit No. SP0000850, which includes the 80K Discharge;
- Significant Industrial User (SIU) General Permit Registration No. CTSIU0051, which covers the Coal Pond Discharge; and,
- NPDES Permit No. CT0003875, which includes the three primary discharges and four sub-dicharges, all of which have been inactive since the RRF ceased operation.

2.1 Pretreatment Permit No. SP0000850

Pretreatment Permit No. SP0000850 was issued by the Connecticut Department of Environmental Protection ("DEP", now known as the Connecticut Department of Energy & Environmental Protection ("DEEP")) on April 27, 2011, for a five-year term. This Permit remains in effect because the Materials Innovation and Recycling Authority ("MIRA") submitted a timely

application to renew on October 29, 2015, with an addendum submitted February 5, 2016 (DEEP Application No. 201508420). Per Section 22a-6j(a) of the Connecticut General Statutes, SP0000850 will continue in effect until such time as the DEEP Commissioner disposes of the application (i.e., issues a renewed Permit or denies issuance of a Permit).

SP0000850 covers two permitted discharges:

- Discharge Serial Number ("DSN") 002B (commonly referred to as the "Neutralization Basin" or "Neut Basin" discharge), and
- DSN 002C (the 80K Discharge).

DSN 002B

DSN 002B has been inactive since the RRF ceased operation in July 2022; however, there remains a monthly reporting obligation, namely, submission of a monthly Discharge Monitoring Report ("DMR") via the NetDMR web-based reporting portal. Monthly submission of DMRs for DSN 002B must continue until such time as the DEEP Commissioner disposes of the application to renew the permit.

It is important to note that the Neutralization Basin and its associated mixing, pumping, pH monitoring and flow monitoring systems are still utilized for the Coal Pond Discharge under SIU General Permit Registration No. CTSIU0051.

DSN 002C

DSN 002C is an active discharge that is primarily composed of stormwater that enters the PBF via roof leaks, pipe leaks, etc. Water that accumulates inside the PBF is conveyed to an 80,000 gallon equalization tank (the "80K Tank"), which is located outside the southeastern corner of the PBF. There are two conveyances of water from the PBF to the 80K Tank:

- the trench drain system around the ash quench baths on the first floor of the PBF, and
- the discharge from the Sump #6 pump in the Turbine Hall basement.

Water that reaches the trench drain system around the ash quench baths on the first floor of the PBF flows via gravity to the 80K Tank. Water that reaches the Turbine Hall basement flows into one of three sumps - Sumps #2, #4 and #6. Sumps #2 and #4 are equipped with pumps to move the collected water to Sump #6; however, the pumps in Sumps #2 and #4 have failed due to lack of environmental controls (i.e., no heat, no dehumidification) following the shutdown of the RRF. MIRA DA has been utilizing a portable sump pump to convey water from Sumps #2 and #4 to Sump #6, moving the sump pump between the Sumps #2 and #4. Sump #6 conveys water to the 80K Tank.

Initiation of the 80K Discharge is via a computerized interface with the PBF's distributed control system ("DCS"). The DCS will allow the 80K Discharge to be initiated if the pH of the wastewater is between 6.5 S.U. and 8.5 S.U. (the permit-specified discharge limits for pH are between 6 S.U. and 9 S.U.). During DSN 002C discharge events, water from the 80K tank is pumped to an oil/water separator that then discharges to a sanitary sewer lift station. The piping between the 80K Tank and the oil/water separator is equipped with pH and water flow meters that

continuously monitor and record the pH, flow rate and totalized flow of the discharging wastewater. If the pH of the discharging wastewater falls outside of the range of 6.5 S.U. to 8.5 S.U., then an alarm will sound on the DCS work station and the programmable logic controller (PLC) for the 80K Discharge will close an automated valve, thereby ceasing the discharge and causing the 80K Tank wastewater to re-circulate.

It is important to note that wastewater in the 80K Tank must continuously be re-circulated in order to ensure that the pH probe is continuously wetted. If the wastewater re-circulation was to be turned off, then the pipe section with the pH probe would go dry, and the bulb of the pH probe would dry out and sustain damage, which would necessitate replacement of the pH probe.

2.2 SIU General Permit Registration No. CTSIU0051

Approval of SIU General Permit Registration No. CTSIU0051 was issued by DEEP on July 25, 2023. The SIU General Permit is scheduled to expire on October 30, 2025. DEEP has indicated its intention to reissue the SIU General Permit, and provided a draft permit dated July 2024 for public consideration and comment. DEEP is currently targeting May 2, 2025 for publication of the Notice of Tentative Determination on the draft SIU General Permit for reissuance. If reissuance of the SIU General Permit is delayed (for example, by a petition for a public hearing), then DEEP will have to issue a notice of extension for the existing SIU General Permit; otherwise, it will expire on October 30, 2025.

DSN 002E

The discharge of the coal pond wastewater to the sanitary sewer is identified as DSN 002E. The water that accumulates in the coal pond is primarily stormwater runoff from the industrialized portions of the PBF, such as the areas around the baghouses and the ash loadout area. A portion of the PBF roof also discharges stormwater to the coal pond. In the event of operational issues with the 80K Discharge and/or the Neut Basin, water from the 80K Tank and/or the Neut Basin can also be directed to the coal pond.

As mentioned previously, the coal pond discharge flows through the Neut Basin, which provides continuous pH and flow monitoring of the discharge to the sanitary sewer. Prior to initiating the coal pond discharge, the operator must ensure that all flexible hoses running from the coal pond pump house to the Neut Basin are properly connected. The centrifugal pump in the coal pond pump house is manually started in the pump house in order to initiate the discharge. The discharge from the centrifugal pump flows through a bag filter assembly for removal of solids before being conveyed to the Neut Basin.

Initiation of the discharge from the Neut Basin occurs at the local control panel for the Neut Basin pumps and valves, which is located in the Demineralization Room (the "Demin Room") of the PBF, inside the southeastern corner of the PBF. The Neut Basin is equipped with a pH meter, and the piping between the Neut Basin and the sanitary sewer is equipped with a flow meters; these meters continuously monitor and record the pH, flow rate and totalized flow of

the discharging wastewater. The permit-specified discharge limits for pH of the Coal Pond Discharge are between 5.5 S.U. and 10.0 S.U. (limits from the MDC Ordinance for wastewater discharges). If the pH of the discharging wastewater falls outside of the range of 6.0 S.U. to 9.5 S.U., then an alarm will sound on the DCS work station and the programmable logic controller (PLC) will close an automated valve for the Neut Basin discharge and open an automated valve for Neut Basin recirculation, thereby ceasing the discharge and causing the Neut Basin wastewater to re-circulate.

Important notes:

- The flow rate of water into the Neut Basin from the coal pond should be in balance with the rate of water discharging from the Neut Basin to the sanitary sewer. If the flow rate of water into the Neut Basin is greater than the discharge flow rate to the sanitary sewer, then the Neut Basin could fill with water and overflow. Conversely, if the flow rate of water into the Neut Basin is less than the discharge flow rate to the sanitary sewer, then the Neut Basin could reach a "low level" condition which would automatically turn off the Neut Basin discharge pump.
- The coal pond discharge pump operates in a manual mode, and its operation is not controlled in any way by the Neut Basin. Therefore, the coal pond discharge pump will continuously operate, even if the Neut Basin discharge ceases for some reason (i.e., discharge pH out of permitted range, low level condition in the Neut Basin, etc.). It is therefore critical that the Coal Pond Discharge be checked by personnel on a regular basis on days of active discharge.

3. Operations and Management Plans

Operations and maintenance (O&M) plans for the Neut Basin Discharge, the 80K Discharge, and the Coal Pond Discharge have been developed and approved by CT-DEEP as part of the permitting for these discharges to the sanitary sewer. The current versions of these O&M Plans are as follows:

- For Pretreatment Permit No. SP0000850: *Sewer Discharge Operating and Maintenance Manual*, NAES Corporation, Rev. February 2016. (see Attachment A)
- For SIU General Permit Registration No. CTSIU0051: *Operation & Maintenance Plan, Discharge of Wastewater from the "Coal Pond" to the Sanitary Sewer*, Materials Innovation and Recycling Authority, September 30, 2022, Revision 0. (see Attachment B)

Full copies of these O&M plans are included in the referenced Attachments A and B.

4. Electric Circuits That Must Remain Energized

There are certain electric circuits in the PBF that must remain energized in order for the proper operation of the wastewater discharges.

These circuits are summarized below; please refer to Attachment C for illustrations of these electrical system components.

The following Equipment must remain energized in order to support the wastewater discharges to the sanitary sewer:

CAPC SUS 12 Bus 1

- CAPC-MCC-123

  CAPC-MCC-123

  - Chem Waste Pump 1A
  - Chem Waste Discharge Valve MBV-6
  - Chem Waste Discharge Valve MBV-12
  - Power distribution panel 480v PP1231
  - CAPB-XFM-1231

  Condenser MCC-5

  - #2 Charger

CAPC SUS 42 Bus #4

- CAPC-MCC-422

  CAPC-MCC-442

  - Chem Waste Pump 1B
  - Chem Waste Mizer

  Condenser MCC-6

  - #1 Charger
  - #2 Charger

CAPC SUS 11 Bus 1

- Warehouse MCC

  Warehouse MCC

  - 80K Pump South
  - 80K Pump North
  - 8 West Sanitary Lift Station

- 8 East Sanitary Lift Station
- Top Oil Water Separator
- Bottom Oil Water Separator
- Heat Trace 120vac
- #7 Dirty Water Sump Pump Panel
    - Sanitary Lift Pump 3496
    - Sanitary Lift Pump 3437
- PPL-WH-1

CAPI-PPL-3 (UPS)

- Power to Server rack 4 gang Outlet

CAPI-PPL-1 (UPS)

- PPL-001 (UPS)
    - Power to Server Rack 4 gang Outlet

UPS Subpanel

- PPL-002 (UPS)
    - Power to Server Rack 4 gang Outlet

PPL-01

- Power to Server Rack 4 Gang Outlet

PPL-WH-1

- Power to Server Rack and PCs in PBF Warehouse Office

5. DCS for Discharge Control and Monitoring

The control and monitoring of certain wastewater discharges to the sanitary sewer continue to utilize elements of the Distributed Control System (DCS) that was formerly utilized to manage and coordinate all PBF processes and equipment. Specifically, the DCS elements are utilized to:

- initiate, monitor (pH and flow), and shutdown the 80K Discharge (i.e., DSN 002C under the Pretreatment Permit); and,
- monitor (pH and flow) the discharge of coal pond wastewater from the Neut Basin to the sanitary sewer (i.e., DSN 002E under the SIU General Permit).

NOTE: The pump that transfers water from the coal pond to the Neut Basin is NOT tied into the DCS. The operation of this transfer pump must be checked regularly on days that the discharge is active, in order to ensure that the pumping rates of water from the coal pond to the Neut Basin and from the Neut Basin to the sanitary sewer are approximately equal.

6. Downloading and Summarizing Wastewater Monitoring Data

Wastewater monitoring data, including pump status, discharge valve status, pH and flow rate, is continuously recorded and stored by the DCS. The servers and PCs specific to the 80K Discharge and the Neut Basin discharge have been relocated from the cable spreading room and the PBF control room to the PBF Warehouse office. The "Engineering Workstation" is utilized to access and download recorded data. After the data is downloaded and saved in a Microsoft Excel-compatible format, the data can then be evaluated and summarized with the Excel workbook named "Demin pH Data.xls" on any PC that runs Microsoft Excel.

Attachment D of this Plan is a detailed description of the procedure to download, evaluate and summarize the recorded wastewater monitoring data.

This Attachment Not Included for Brevity

Attachment A

Sewer Discharge Operating and Maintenance Manual, NAES Corporation, Rev. February 2016

This Attachment Not Included for Brevity

Attachment B

Operation & Maintenance Plan, Discharge of Wastewater from the "Coal Pond" to the Sanitary Sewer, Materials Innovation and Recycling Authority, September 30, 2022, Revision 0

Attachment C

Electrical Circuits That Must Remain Energized to Support Wastewater Discharges to the Sanitary Sewer

Rev. Date: 5/1/2025

#1 oily waste separator heater	MCC-warehouse	21
#1 pugmill feeder	MCC-432	13
#1 pugmill paddle shaft	MCC-432	13
#1 Vent fan	bus 4	1
#11 atomizer	sus 43	4
#11 FD fan	bus 1	1
#11 ID fan	bus 1	1
#12 atomizer	sus 13	4
#12 FD fan	bus 2	1
#12 ID fan	bus 2	1
#13 atomizer	sus 43	4
#13 FD fan	bus 4	1
#13 ID fan	bus 4	1
#1M BFP	sus 11	2
#2 fly ash rec. feed pump	MCC-432	13
#2 fly ash rec. feed tank mixer	MCC-432	13
#2 oily waste separator heater	MCC-warehouse	21
#2 pugmill feeder	MCC-131	8
#2 pugmill paddle shaft	MCC-131	8
#2 recycle feed cvy	MCC-431	12
#2 Vent fan	bus 3	1
#9 FD fan	bus 1	1
11 add. Feed tank mixer	MCC-431	12
11 add. Recycle strainer	MCC-431	12
11 air heater cvy	MCC-431	12
11 baghouse reverse air fan	MCC-431	12
11 bottom ash xfer.	MCC-421	9
11 bottom ash xfer. Blower	MCC-421	9
11 distribution spout	MCC-311	19
11 econ. Cvy	MCC-421	9
11 ID fan discharge damper	MCC-431	12
11 ID fan discharge damper seal air fan	MCC-431	12
11 N/S	MCC-421	9
11 OFA fan	sus 42	3
11 PDA fan	MCC-421	9
11 S.H. vent valve MBV-100	MCC-423	11
11 SDA bypass damper	MCC-431	12
11 SDA bypass damper seal air fan	MCC-431	12
11 SDA inlet damper	MCC-431	12
11 SDA inlet damper seal air fan	MCC-431	12
11 SDA outlet damper	MCC-431	12
11 SDA outlet damper seal air fan	MCC-431	12
11 SSC	MCC-421	9

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

13C chute roller	MCC-423	11
13C sifting screw	MCC-422	10
13D auger drive	MCC-423	11
13D sifting screw	MCC-422	10
13E sifting screw	MCC-422	10
13F sifting screw	MCC-422	10
13G sifting screw	MCC-422	10
13H sifting screw	MCC-422	10
13I sifting screw	MCC-422	10
13J sifting screw	MCC-422	10
15KVA transformer	MCC-cond. #6	17
15KVA transformer feeder	MCC-cond. #6	17
15kVA xfmr	MCC-screenhouse #1	14
15kVA xfmr	MCC-cond. #5	16
15kVa xfmr	MCC-warehouse	21
15KVA xfmr	MCC-screenhouse #2	15
15kVA xfmr feeder	MCC-screenhouse #1	14
15KVA xfmr feeder	MCC-screenhouse #2	15
15kVA xfmr feeder	MCC-cond. #5	16
15kVA xfmr feeder	MCC-admin	20
15kVA xfmr feeder	MCC-warehouse	21
1A add. xfer pump	MCC-432	13
1A CCCW pump	MCC-121	5
1A chem waste pump	MCC-123	7
1A FAC	MCC-431	12
1A SMUW xfer pump	MCC-131	8
1A SW pump	bus 1	1
1A SW pump discharge valve	MCC-screenhouse #2	15
1A traveling screen	MCC-screenhouse #2	15
1A-25S station aux xfmr	MCC-cond. #5	16
1A-26S station aux xfmr	MCC-cond. #5	16
1B add. Xfer pump	MCC-131	8
1B CCCW pump	MCC-422	10
1B chem waste pump	MCC-422	10
1B dewatering pump	MCC-screenhouse #1	14
1B FAC	MCC-131	8
1B scrubber make-up water pump	MCC-431	12
1B sump slurry pump	MCC-311	19
1B SW pump	bus 4	1
1B SW pump discharge valve	MCC-screenhouse #2	15
1B traveling screen	MCC-screenhouse #2	15
230/208v pp xfmr 4232	MCC-423	11
24" lathe starter	MCC-workshop	22

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

6B BFP	bus 4	1
6B BFP discharge valve	MCC-422	10
6B BFP L.O. pump	MCC-422	10
6B bottom ash blower	MCC-422	10
6B bottom ash cvy	MCC-422	10
6B bottom ash winch	MCC-422	10
6B cond. Booster pump	sus 42	3
6B cond. pump	MCC-422	10
6-EL	MCC-workshop	22
6N CW pump	sus 41	2
6N CW traveling screen	MCC-screenhouse #1	14
6N CWP discharge valve	MCC-screenhouse #1	14
6S CW pump	sus 11	2
6S CW traveling screen	MCC-screenhouse #1	14
6S CWP discharge valve	MCC-screenhouse #1	14
7N oily waste pump	MCC-warehouse	21
7S oily waste pump	MCC-warehouse	21
8E sanitary lift pump	MCC-warehouse	21
8W sanitary lift pump	MCC-warehouse	21
accumulator pump	MCC-cond. #5	16
add. Storage tank mixer	MCC-431	12
Admin MCC	sus 12	3
ash storage PRV-1	MCC-131	8
Aux Boiler MCC	sus 41	2
band saw starter	MCC-workshop	22
Barge Unloader	bus 3	1
battery charger #2	MCC-cond. #6	17
battery charger 1	MCC-cond. #5	16
battery charger 3	MCC-cond. #5	16
belt feeder #1 F&G LOH	MCC-211	18
belt feeder #1 FPG Fan	MCC-211	18
bench grinder starter 1	MCC-workshop	22
bench grinder starter 2	MCC-workshop	22
BFP #1M hydraulic coupling pump	MCC-cond. #6	17
Bus 1 to 3 tie bkr	bus 3	1
Bus 2 to 4 tie bkr	bus 4	1
CAPB xfmr 4311	MCC-431	12
chem waste mixer	MCC-422	10
chem waste pump discharge valve MBV-6	MCC-123	7
chem waste pump recirc valve MBV-12	MCC-123	7
Chimney lighting j-box #40	MCC-431	12
circ water sump pump	MCC-screenhouse #1	14
circulation fan 1	MCC-123	7

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

circulation fan 2	MCC-123	7
circulation fan 3	MCC-123	7
coal belt feeder #1	MCC-211	18
coal cvy 1	MCC-211	18
coal cvy 2	MCC-211	18
coal cvy 3	MCC-211	18
coal cvy 4	MCC-211	18
coal cvy. 3 mag sep.	MCC-311	19
coal dist. Power	MCC-421	9
coal diverter gate 1	MCC-311	19
condensate make-up pump	MCC-cond. #5	16
condensate receiver motor #1	MCC-cond. #6	17
condensate receiver motor #2	MCC-cond. #6	17
condenser pit starters 3,4,5,6	MCC-cond. #5	16
control room A/C	MCC-421	9
control room A/C unit	MCC-131	8
control room A/C unit heat coils (transfer building)	MCC-311	19
control room dust htr.	MCC-131	8
CR-3 motor 1	MCC-cond. #5	16
CR-3 motor 2	MCC-cond. #5	16
CW sump pump	MCC-screenhouse #2	15
D.C. center electric heater UH-27	MCC-cond. #5	16
D.C. center electrical feeder	MCC-cond. #6	17
demin area supply fan 1	MCC-123	7
demin water heater #1	MCC-422	10
demin water xfer pump 1	MCC-123	7
dirty water sump 1	MCC-cond. #5	16
dirty water sump 2	MCC-cond. #5	16
dirty water sump 3	MCC-cond. #5	16
dirty water sump 4	MCC-cond. #5	16
dirty water sump pump #1	MCC-cond. #6	17
dirty water sump pump #2	MCC-cond. #6	17
distribution spout 13	MCC-211	18
distributor drive power	MCC-121	5
distributor drive power	MCC-123	7
diverting spout 3	MCC-211	18
diverting spout 4	MCC-311	19
dozer garage feeder breaker	MCC-211	18
drill press starter	MCC-workshop	22
dust collector control panel #1	MCC-311	19
dust collector control panel #2	MCC-211	18
dust collector cp2	MCC-131	8
econ D.D. vlv	MCC-421	9

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

hydraulic pump motor	MCC-cond. #6	17
I/O rack	MCC-421	9
I/O rack CASA-PMC-#14B	MCC-422	10
I/O rack CASA-PMC-13	MCC-121	5
I/O rack casb-pmc-15a	MCC-431	12
I/O rack CASB-PMC-15B	MCC-432	13
I/O rack CBMC-PMC-13	MCC-131	8
I/O rack cbmc-pmc-14a	MCC-431	12
I/O rack CBMC-PMC-14B	MCC-432	13
I/O rack CBMF-PMC-13	MCC-211	18
I/O rack CBMF-PMC-23	MCC-311	19
I/O rack cccc-pmc-14a	MCC-431	12
I/O rack cccc-pmc-15a	MCC-431	12
I/O rack CCCC-PMC-2413	MCC-131	8
I/O rack CCCC-PMC-24A	MCC-131	8
I/O rack CCCC-PMC-34A	MCC-432	13
I/O rack CCCC-PMC-34B	MCC-432	13
I/O rack CCHU-PMC-13	MCC-211	18
I/O rack CCHU-PMC-14	MCC-311	19
Inst. Air comp. #1	sus 12	3
Inst. Air comp. #2 (STBY)	sus 42	3
large drill press	MCC-workshop	22
lighting panel	MCC-admin	20
lighting panel #4	MCC-cond. #6	17
lighting panel 2	MCC-cond. #5	16
lighting panel 3	MCC-cond. #5	16
lighting panel A1	MCC-admin	20
lighting panel A4	MCC-admin	20
lighting panel SCI	MCC-screenhouse #1	14
lighting panel SO3	MCC-screenhouse #2	15
lighting panel W-H 1	MCC-warehouse	21
lighting xfmr admin building	MCC-admin	20
lube oil transfer pump	MCC-cond. #6	17
Mag. Sep. #1 rectifier power supply	MCC-211	18
mag. sep. #3 rectifier power supply	MCC-311	19
MCAP hoist	MCC-warehouse	21
MCC room PRV #1	MCC-431	12
MCC room PRV-2	MCC-131	8
MCC-121 (12 stoker)	sus 12	3
MCC-122 (13 S. 6th floor)	sus 12	3
MCC-123 (13 W. stoker)	sus 12	3
MCC-131 (12 MCC room)	sus 13	4
MCC-421 (11 stoker)	sus 42	3

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

MCC-422 (13 S. stoker)	sus 42	3
MCC-423 (11/12 6th floor)	sus 42	3
MCC-431 (11 MCC room)	sus 43	4
MCC-432 (13 MCC room)	sus 43	4
microwave xfmr	MCC-admin	20
milling machine starter	MCC-workshop	22
motor space heater panel	MCC-cond. #5	16
motor space heater panel	MCC-cond. #6	17
motor space heater power panel	MCC-screenhouse #1	14
motor space heater power panel	MCC-screenhouse #2	15
motor space heater power panel	MCC-admin	20
NALCO panel (6th floor)	sus 41	2
NU elevator	MCC-admin	20
oil reservoir return pump	MCC-admin	20
plenum air damper panel	MCC-cond. #5	16
plenum air damper panel	MCC-cond. #6	17
power distribution panel "G"	MCC-cond. #6	17
power east side panel	MCC-workshop	22
power west side panel	MCC-workshop	22
PRV-1	MCC-423	11
PRV-10 RDF area	MCC-122	6
PRV-2	MCC-423	11
PRV-3	MCC-423	11
PRV-4	MCC-423	11
PRV-5	MCC-122	6
PRV-6	MCC-122	6
PRV-7	MCC-122	6
PRV-8	MCC-122	6
PRV-9 RDF area	MCC-423	11
pugmill heater	MCC-422	10
RDF 511	MCC-211	18
RDF 513	MCC-311	19
RDF 515	MCC-211	18
RDF 517	MCC-311	19
RDF 519	MCC-211	18
RDF 521	MCC-311	19
RDF 523	MCC-211	18
RDF 525	MCC-311	19
reclaim pit PRV-2	MCC-311	19
roof top A/C	MCC-warehouse	21
Screenhouse #1 MCC	sus 41	2
Screenhouse #3 MCC	sus 11	2
Serv. Air comp.	sus 12	3

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

Warehouse MCC	sus 11	2
warehouse over head door	MCC-warehouse	21
weld	MCC-421	9
welding receptacle	MCC-423	11
welding receptacle	MCC-432	13
welding receptacle	MCC-cond. #6	17
welding receptacle	MCC-cond. #6	17
welding receptacle	MCC-cond. #6	17
welding receptacles	MCC-workshop	22
welding receptacles	MCC-screenhouse #1	14
welding receptacles	MCC-warehouse	21
welding receptacles	MCC-screenhouse #2	15
welding receptacles	MCC-cond. #5	16
welding receptacles	MCC-cond. #5	16
welding receptacles	MCC-cond. #5	16
workshop MCC feeder	MCC-warehouse	21
WPF station service #1	bus 2	1
WPF station service #2	bus 3	1
xfer building control room supply fan #1	MCC-211	18
xfmr ICE	MCC-warehouse	21

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

Bus #1

#11 FD fan
#11 ID fan
5A BFP
1A SW pump
SUS #11
SUS #12
SUS #13
#9 FD fan

SUS 11

5S CW pump
6S CW pump
Warehouse MCC
Screenhouse #3 MCC
Tie breaker
#1M BFP

SUS 12

12 OFA fan
5A cond. Booster pump
5B cond. Booster pump
Inst. Air comp. #1
Serv. Air comp.
5 cond. MCC
Admin MCC
MCC-121 (12 stoker)
MCC-122 (13 S. 6th floor)
MCC-123 (13 W. stoker)
Tie bkr

SUS 13

#12 atomizer
MCC-131 (12 MCC room)
Tie Bkr

Bus #2

#12 FD fan
#12 ID fan
5B BFP
WPF station service #1
utility revenue metering
SUS #21

SUS 21

MCC-211

Bus #3

6A BFP
WPF station service #2
Barge Unloader
Utility revenue metering
SUS #31
#2 Vent fan
Bus 1 to 3 tie bkr

SUS 31

MCC-311

Bus #4

#13 FD fan
#13 ID fan
6B BFP
SUS #41
SUS #42
SUS #43
#1 Vent fan
1B SW pump
Bus 2 to 4 tie bkr

SUS 41

5N CW pump
6N CW pump
Aux Boiler MCC
Screenhouse #1 MCC
NALCO panel (6th floor)

SUS 42

11 OFA fan
13 OFA fan
6A cond. Booster pump
6B cond. Booster pump
Inst. Air comp. #2 (STBY)
6 cond. MCC
MCC-421 (11 stoker)
MCC-422 (13 S. stoker)
MCC-423 (11/12 6th floor)

SUS 43

#11 atomizer
#13 atomizer
MCC-431 (11 MCC room)
MCC-432 (13 MCC room)

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

BUS #2

#12 FD fan
#12 ID fan
5B BFP
WPF station service #1
utility revenue metering
SUS #21

	BUS 2 feeder	WPF #1	12 FD	5B BFP
	potential xfmrs	12 ID	SUS 21	Bus #4 tie



BUS #1

#11 FD fan
#11 ID fan
5A BFP
1A SW pump
SUS #11
SUS #12
SUS #13
#9 FD fan

	5A BFP	11 ID	**SUS 12**	1A SW pump	BUS 1 feeder
Bus #3 tie	**SUS 11**	11 FD	SUS 13	9 FD	potential xfmrs



BUS #3

6A BFP
WPF station service #2
Barge Unloader
Utility revenue metering
SUS #31
#2 Vent fan
Bus 1 to 3 tie bkr

	BUS 3 feeder	WPF #2	SUS 31	MCAP Fan #2
	potential xfmrs	6A BFP	Barge Unloader	BUS 1 to 3 TIE BKR



BUS #4

#13 FD fan
#13 ID fan
6B BFP
SUS #41
SUS #42
SUS #43
#1 Vent fan
1B SW pump
Bus 2 to 4 tie bkr

6B BFP	SUS 41	13 FD	MCAP Fan #1	1B SW pump	BUS 4 feeder
BUS 2 to 4 TIE BKR	13 ID	**SUS 42**	SUS 43	BFP mtr 15	potential xfmrs



Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin

SUS 11/41 (ash alley north 11 SSC)

SUS #11

5S CW pump
6S CW pump
Warehouse MCC
Screenhouse #3 MCC
Tie breaker
#1M BFP

27 relay	5S CW pump	Screenhouse #3 MCC	Aux Boiler MCC	27 relay
MAIN	6S CW pump	TIE BKR		MAIN
59 relay	BFP 1M	NALCO	6N CW pump	59 relay
	Warehouse MCC	Screenhouse #1 MCC	5N CW pump	

SUS #41

5N CW pump
6N CW pump
Aux Boiler MCC
Screenhouse #1 MCC
NALCO panel (6th floor)



Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

SUS 12/42 (4160 room)

27relay	12 OFA	MCC-122		COND. 6 MCC	MCC-422	6A cond. Booster pump	27 relay
Main feeder	5A cond. Booster pump	SERV. AIR COMP	TIE BKR	INST. AIR COMP. #2 (STBY)	MCC-421	13 OFA	Main feeder
	5B cond. Booster pump	INST. AIR COMP. #1	MCC-123	MCC-423	6B cond. Booster pump	11 OFA	
59 relay	MCC-121	COND. 5 MCC	ADMIN MCC				59 relay

SUS #12

12 OFA fan
5A cond. Booster pump
5B cond. Booster pump
Inst. Air comp. #1
Serv. Air comp.
5 cond. MCC
Admin MCC
MCC-121 (12 stoker)
MCC-122 (13 S. 6th floor)
MCC-123 (13 W. stoker)
Tie bkr



SUS #42

11 OFA fan
13 OFA fan
6A cond. Booster pump
6B cond. Booster pump
Inst. Air comp. #2 (STBY)
6 cond. MCC
MCC-421 (11 stoker)
MCC-422 (13 S. stoker)
MCC-423 (11/12 6th floor)

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

MCC-123

	12A grate		demin heater fans	bay fan 19	weld	
A/C	12B grate	circ fan 1			5B BFP L.O. pump	
		circ fan 2		chem waste 1A	ignitor air fan 12A	
demin	chem waste discharge	circ fan 3			ignitor air fan 12B	
3B regen water		demin area supply fan			PDA	
	chem waste recirc					

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

12A grate drive
12B grate drive
12 PDA fan
12A ignitor air fan
12B ignitor air fan
3B demin regen water pump
1A chem waste pump
demin water xfer pump 1
demin area supply fan 1
chem waste pump recirc valve MBV-12
chem waste pump discharge valve MBV-6

5B BFP lube oil pump
distributor drive power
circulation fan 1
circulation fan 2
circulation fan 3
480v pp 1231
240v pp xfmr 1231
electrical bay fan#19

MCC-131 (12 MCC room)

	CAPB-xfr-1312	CEM outlet	2A FA rec. feed pump		LP-xfmr-1311		hopper heater	SDA seal air inlet damper		freeze protection		
	weld			12 add. Feed tank mixer	SDA inlet damper 12A1			SDA outlet seal air damper			air heater cvy	5B cvy
	2A SMUW pump		1B add. Xfer pump	12A add. Feed pump			SDA bypass damper	SDA bypass seal air damper	12 reverse air fan	12A FAC	1B FAC	#2 pugmill paddle shaft
CAPC-PPL-1311		weld	1A SMUW xfer pump	12B add. Feed pump	scrubber control room HTR		SDA outlet damper	PRV-2		12B FAC		#2 pugmill feeder
add. Prep supply fan	ash storage PRV-1		I/O rack	I/O rack					add. Rec. strainer	pugmill dry crossover	2B FAC	
seal air fan	scrubber 12 MCC room vent fan						12 ID fan discharge damper					

12 SDA inlet damper seal air fan
12 SDA outlet damper seal air fan
12 SDA bypass damper seal air fan
12 SDA inlet damper
12 SDA outlet damper
12 SDA bypass damper
12 ID fan discharge damper seal air fan
12 ID fan discharge damper
12A FAC
12B FAC
12 reverse air fan
12A add. Feed pump
12B add. Feed pump
12 add. Feed tank mixer
12 add. Rec. strainer
12 air heater cvy.
2A SMUW pump
2A FAC
#2 pugmill paddle shaft
#2 pugmill feeder



2B FAC
1A SMUW xfer pump
1B add. Xfer pump
1B FAC
5B bottom ash cvy.
control room dust htr.
control room A/C unit
MCC room PRV-2
ash storage PRV-1
hopper heater cp121
dust collector cp2
480v pp 1311
277/480v lp xfmr
120/208v xfmr 1311
freeze protection panel1311
I/O rack CBMC-PMC-13
I/O rack CCCC-PMC-2413
I/O rack CCCC-PMC-24A

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank

MCC-422 (2nd floor south side of 13)

demin water heater	6B BFP L.O. pump		pugmill heater	6B winch	5B blower	MBV-13		13A sifting		N/S
6B	6A BFP discharge valve				6B cond.		3B blower #2	13B sifting	4B blower	bottom ash xfer
		1B chem waste pump				MBV-10				
	6B BFP discharge valve				6B blower		D.D valve	13C sifting	13G sifting	econ cvy
A grate		3A regen pump		1B CCCW pump	xfer blower	13A ignitor air fan	E/W	13D sifting	13H sifting	SSC
	PDA	chem waste mixer			6A cond	13B ignitor air fan	A sifting xfer	13E sifting	13I sifting	I/O rack
B grate							B sifting xfer	13F sifting	13J sifting	

6A cond. pump
6B cond. pump
6A BFP discharge valve
6B BFP discharge valve
6B BFP L.O. pump
6 L.P. extraction MBV-13
6 M.P. extraction MBV-10
6B bottom ash cvy
6B bottom ash blower
6B bottom ash winch
4B bottom ash blower
5B bottom ash blower
1B chem waste pump
chem waste mixer
3A demin regen water pump
demin water heater #1
1B CCCW pump
pugmill heater
13 PDA fan
120/208v pp xfmr 4221
240v xfmr 4221
I/O rack CASA-PMC-#14B

13A ignitor air fan
13B ignitor air fan
13A grate drive
13B grate drive
13 SSC
13 economizer cvy.
13 N/S cvy
13 E/W cvy
13 bottom ash cvy
13 bottom ash blower
13A sifting xfer
13B sifting xfer
13A sifting screw
13B sifting screw
13C sifting screw
13D sifting screw
13E sifting screw
13F sifting screw
13G sifting screw
13H sifting screw
13I sifting screw
13J sifting screw
3B blower #2

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

MCC-COND. #6 (turbine desk area)

	lighting panel	plenum air damper panel	condensate reciever motor #2	power dist.panel 6	weld	weld	condensate reciever motor #1	
		UPS back-up	aux xmfr1a-25s	weld				
	lube oil transfer pump		aux xmfr1a-26s				5B main oil pump	
	emergency seal oil pump		hydraulic motor pump					
seal oil vacuum pump	turning gear		reserve tank vapor extractor				**6-2 dirty water**	**6-1 dirty water**
main seal oil pump	turning gear oil pump		gland seal vapor extractor				6 centrifuge	BFP hydraulic



6 turning gear oil pump
6 turning gear
6 main seal oil pump
6 emergancy seal oil pump
6 seal oil vacuum pump
6 gland steam vapor extractor
6 centrifuge
5B MLOP
condensate reciever motor #1
condensate reciever motor #2
dirty water sump pump #1
dirty water sump pump #2
BFP #1M hydraulic coupling pump
hydraulic pump motor
lube oil transfer pump
motor space heater panel

station aux transformer 1A-25S
station aux transformer 1A-26S
step -up transformer 1A-1X
battery charger #2
supply fan #4
supply fan #5
lighting panel #4
UPS (back-up)
welding receptacle
welding receptacle
welding receptacle
plenum air damper panel
power distribution panel "G"
D.C. center electrical feeder
15KVA transformer feeder
15KVA transformer

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

MCC-warehouse

<table>
<tr><td colspan="2"></td><td>xfmr "ICE"</td><td>test bench E&I</td><td>warehouse roll-up door</td><td>weld</td><td></td><td>MCAP hoist</td><td></td></tr>
<tr><td>7S</td><td>7N</td><td colspan="3">fan deck panel</td><td></td><td>15kVA feeder</td><td>E&I heater</td></tr>
<tr><td>8W</td><td>8E</td><td colspan="3">EF-9</td><td></td><td colspan="2" rowspan="2">motor space heater panel</td></tr>
<tr><td colspan="2">EF-8</td><td colspan="3"></td><td></td></tr>
<tr><td colspan="2"></td><td colspan="2">oily waste heater 1 top</td><td>lighting HH-1</td><td>rooftop A/C</td><td rowspan="2">workshop MCC</td><td colspan="2" rowspan="2">15kVA xfmr</td></tr>
<tr><td colspan="2"></td><td colspan="2">oily waste heater 1 bottom</td><td colspan="2"></td></tr>
</table>

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

7N oily waste pump
7S oily waste pump
8E sanitary lift pump
8W sanitary lift pump
#1 oily waste separator heater
#2 oily waste separator heater
roof top A/C
warehouse over head door
fan deck panel

test cabinet E&I shop.
exhaust fan 9
welding receptacles
lighting panel W-H 1
workshop MCC feeder
15kVA xfmr feeder
15kVa xfmr
xfmr ICE
MCAP hoist

CAPB-PPL-4221 (2nd floor near elevator)

equipment	Breaker		equipment
main CPL turb 6 aux	1	2	main CPL turb 5 aux
turb aux relay panel	3	4	main CPL turb 6 aux
turb aux relay panel	5	6	sample rack
st gen 11 relay panel	7	8	sample rack
st gen 12 relay panel	9	10	sample rack
st gen 13 relay panel	11	12	12 phospate pump
turb aux relay panel	13	14	13 phospate pump
11 SSC dr control unit	15	16	6 sulfite pump (2B)
11 SSC chain motion	17	18	6 amine pump
12 SSC dr control unit	19	20	main CPL turb 5 aux
12 SSC chanin motion	21	22	main CPL turb 6 aux
MCC-121 I/O racks	23	24	elevator cart lighting
MCC-121 space heaters	25	26	main CPL turb 5 aux
MCC-121 motor space heaters	27	28	main CPL turb 6 aux
2A acid pump	29	30	demin sys CPL
	31	32	1A demin caustic pump
bot ash CPL	33	34	main CPL turb 6 aux
bot ash CPL	35	36	MCC-421 space heaters
gen bldg unit heater	37	38	
gen bldg unit heater	39	40	rcpt
	41	42	rcpt

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

CAPB-PPL-1231 (2nd floor south stairs to ash alley)

equipment	Breaker		equipment
rcpt side of panel	1	2	boiler camera 13
11 tangential OFA	3		empty
12 tangential OFA	5	6	RDF handling utility power
13 tangential OFA	7	8	RDF A/B control power
bathroom hotwater heater 208V	9	10	RDF A/B backup control power
	11	12	80K heat trace
13 CP utility	13	14	sample rack utility power
11 CP utility	15	16	rcpt side of panel
12 CP utility	17	18	MCC-422 motor space heater
12 SSC level probe	19	20	MCC-422 space heater
rcpt-outside by warehouse	21	22	SSC 13 local control power
rcpt-by demin/cond tanks	23	24	SSC motion switch
demin alternate control power	25	26	demin silica analyzer
	27	28	junction box outside demin
1B demin caustic pump	29	30	

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

CAPB-PPL-1312 (12 MCC room)

equipment	Breaker		equipment
lime silo dut collector	1	2	
	3	4	
	5	6	OPC heater
	7	8	
	9	10	OPC heater
	11	12	
	13	14	CEM 240V outlet
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
coal pond building lighting	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

CAPC-LXF-1211 (3rd floor outside control room)

equipment	Breaker		equipment
ltg lab & lab storage	1	2	ltg control room fluor dimming power controller
ltg control room kitchen & supervisor office	3	4	ltg flour dimming control staion
ltg control euip room & wiring gallery	5	6	ltg lighting control LC-1 DC lighting
ltg chem lab sink area	7	8	ltg control room fluor dimming power controller
ltg boiler 11 el 64'-9.25", el 55'-0", el 45'-5"	9	10	ltg heater floor el 36'-7 1/4"
ltg south/west of boiler 11	11	12	ltg heater floor el 36'-7 1/4"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	13	14	ltg boiler 12 el64'-9 1/2", el 55'-0", el 45'-5"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	15	16	ltg boiler 12 el64'-9 1/2", el 55'-0", el 45'-5"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	17	18	ltg 12 SSC/ignitors
ltg boiler 11,12 el 31'-0"	19	20	ltg boiler 12,13 el 31'-0"
ltg boiler 11,12 el 31'-0"	21	22	ltg boiler 12,13 el 31'-0"
	23	24	ltg boiler 12,13 el 31'-0"
ltg chemical equip room	25	26	ltg neut basin
ltg bottom ash conveyor	27	28	ltg cable spreading room el 36'-7 1/4"
ltg swgr room 48'-5 1/8"	29	30	ltg shaker above 6th floor
	31	32	ltg boiler 12 stoker
	33	34	ltg boiler 12 stoker
	35	36	ltg boiler 12 stoker
ltg fixtures stoker level	37	38	emergancy DC lighting xfer sw
	39	40	
	41	42	

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

PPL-WH-1

equipment	Breaker		equipment
	1	2	Warehouse Lighting
	3	4	Warehouse Lighting
	5	6	Warehouse Lighting
Office Lights	7	8	Warehouse Lighting
	9	10	Warehouse Lighting
	11	12	Warehouse Lighting
	13	14	
PC/UPS Power	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
	25	26	
PC Power	27	28	
	29	30	
	31	32	
	33	34	
Warehouse O.H. Door	35	36	
	37	38	
	39	40	
	41	42	

Highlighted equipment and electrical buses and panels are associated with wastewater collection and discharge to the sanitary sewer via the 80K Tank and the Neutralization Basin.

Attachment D

Procedure for Downloading, Evaluating and Summarizing Wastewater Monitoring Data

Rev. Date: 5/1/2025

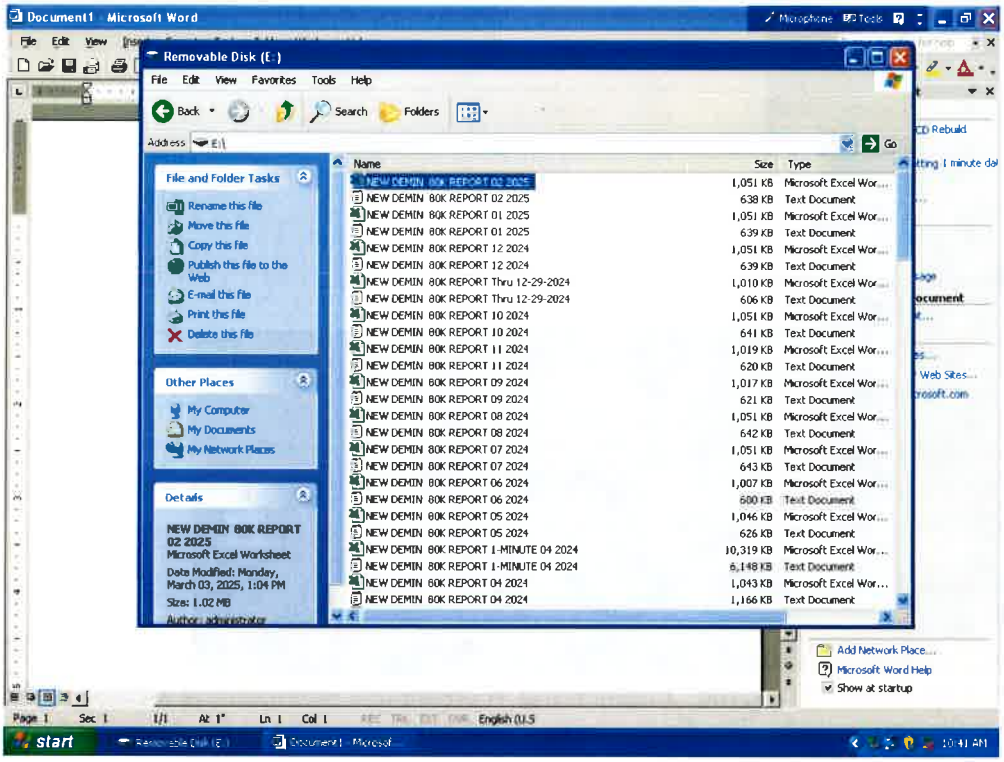
Downloading, Evaluating and Summarizing Wastewater Monitoring Data



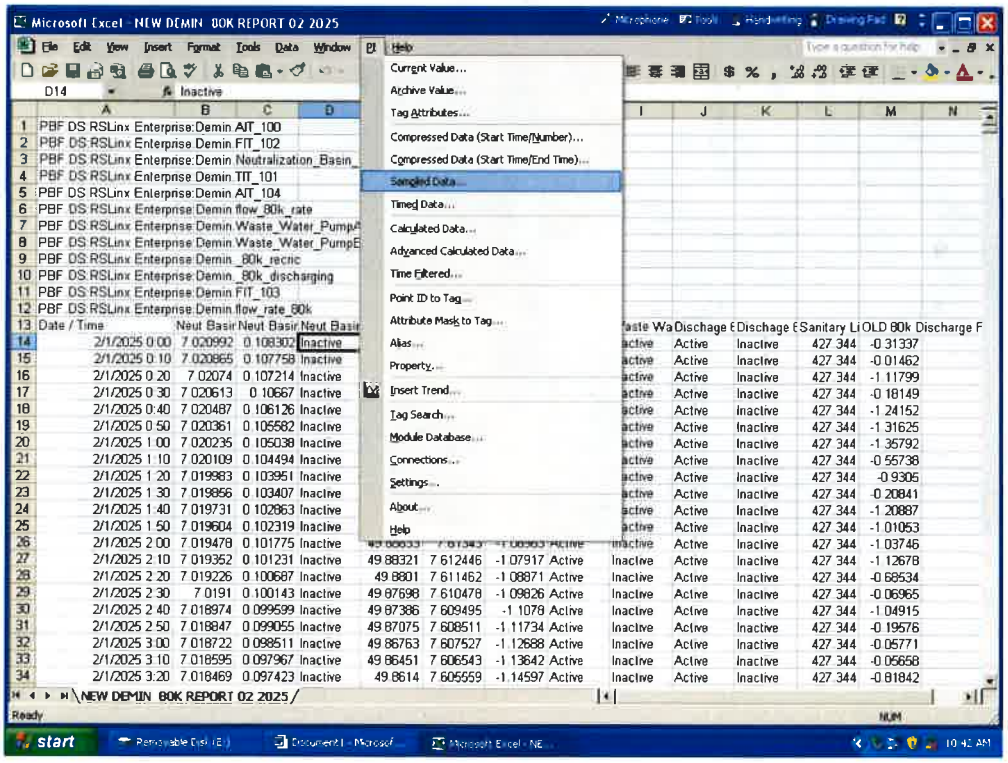
In the PBF Warehouse Office, the "Engineering Workstation" computer is located in the lower left of the server rack. The Engineering Workstation is utilized for downloading wastewater discharge data.



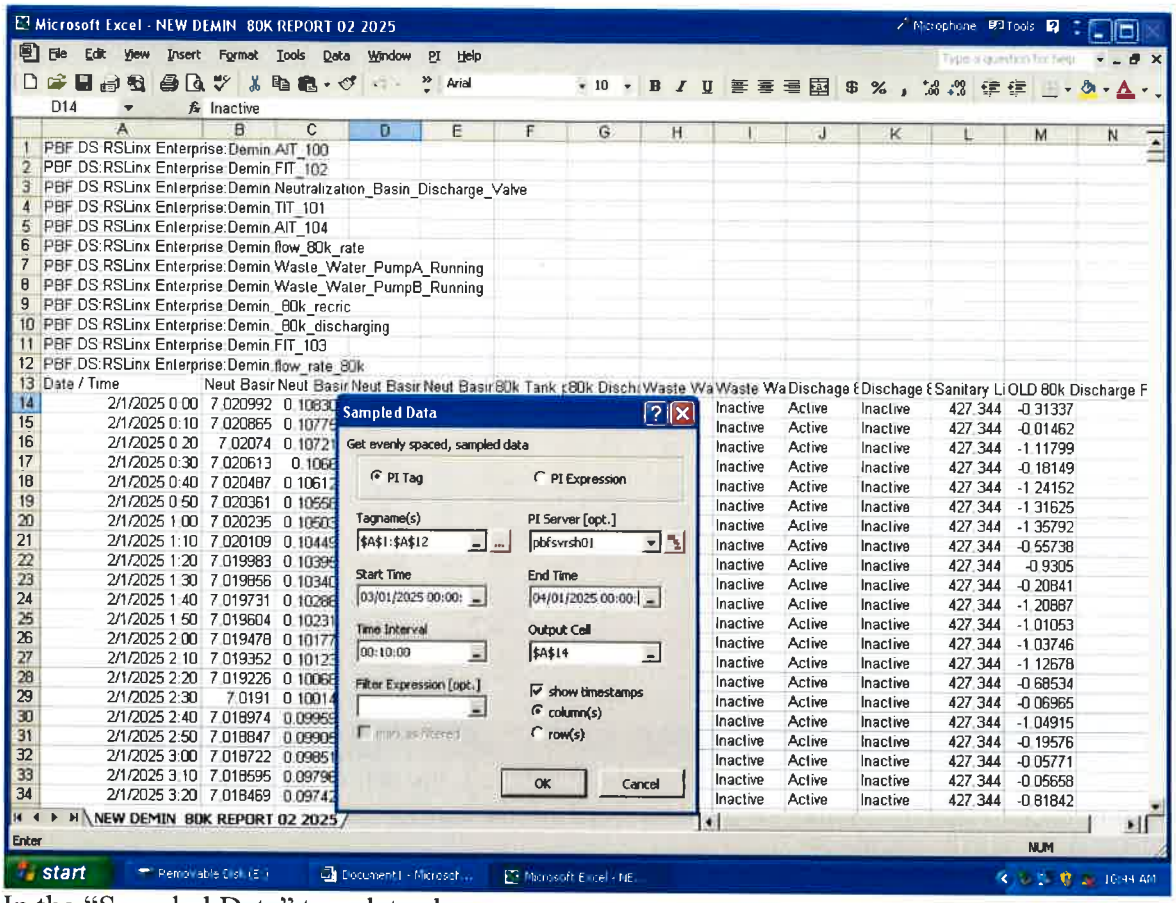
Utilize the keyboard, mouse and monitor on the right to access to the data on the Engineering Workstation. (The keyboard, mouse and monitor on the left are used to initiate and shutdown the "80K Discharge," and to display real-time discharge flow rate, pH, and trend data.)



Insert the wastewater data USB flash drive into the Engineering Workstation, and open the most-recent "NEW DEMIN 80K REPORT" Excel workbook. On the example screen above, this file is "NEW DEMIN 80K REPORT 02-25.XLS."



To specify the data to download, first click the "PI" Datalink menu, and then select "Sampled Data…" from the menu.

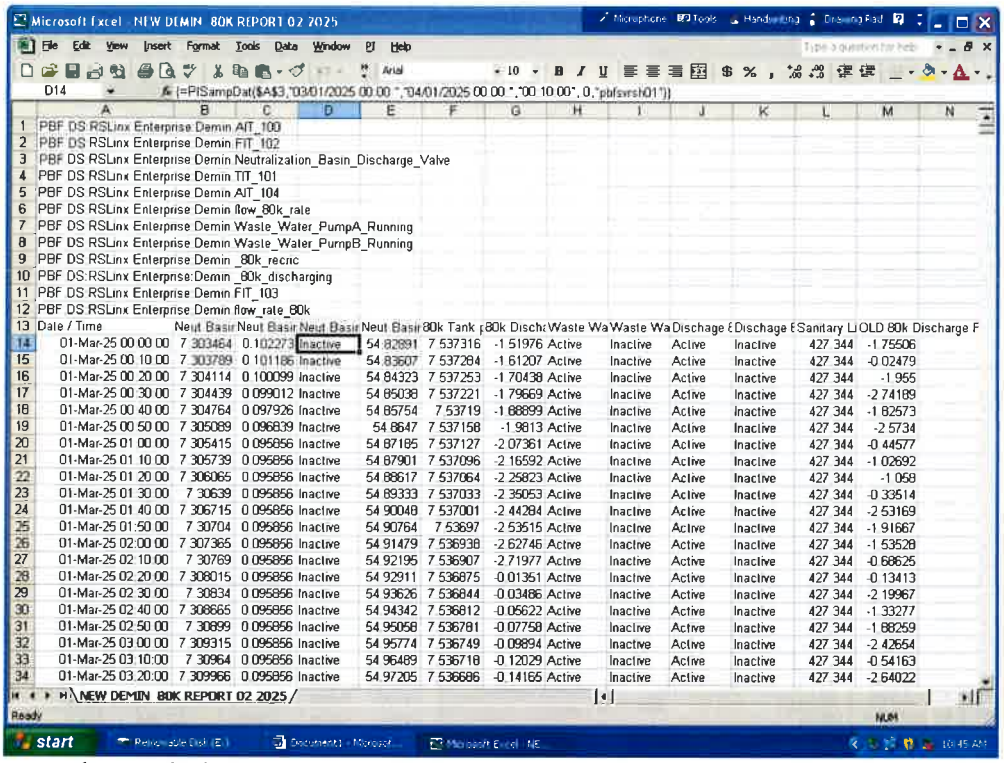


In the "Sampled Data" template above:

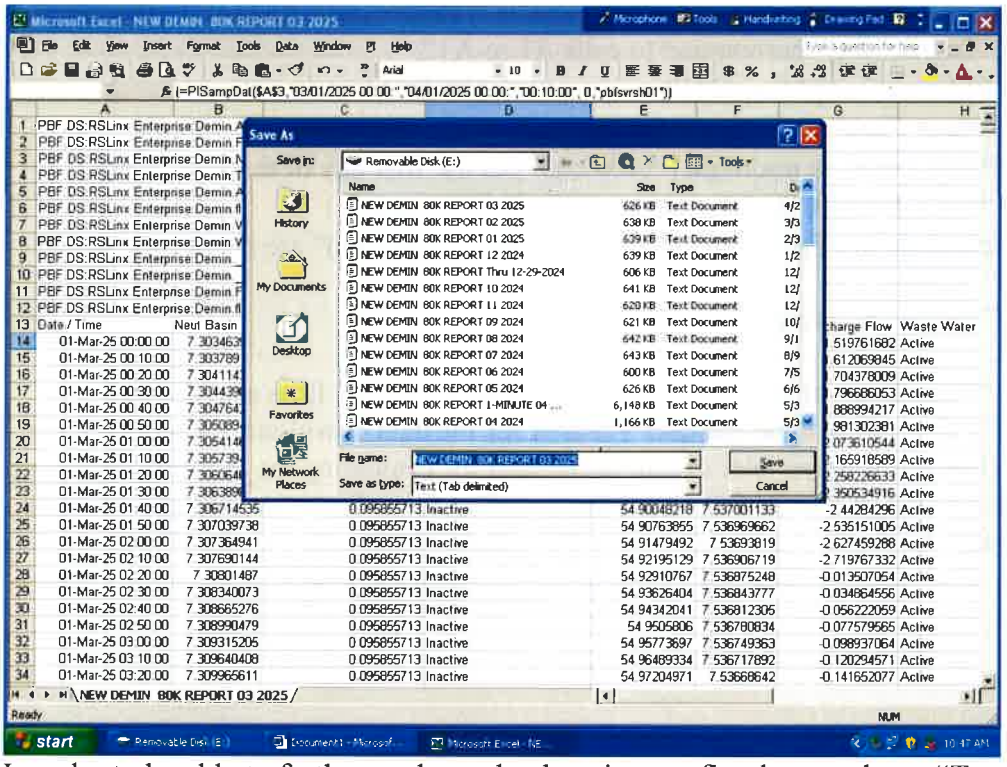
- the "Tagname(s)" correspond to cells A1 to A12;
- the PI Server is "pbfsvrsh01";
- the "Start Time" is midnight ("00:00:00") of the first day of the month;
- the "End Time" is midnight ("00:00:00") of the first day of the next month;
- the "Time Interval" is 10 minutes ("00:10:00"); and
- the check-boxes for "show timestamps" and "column(s)" are checked.

Click "OK" to run the data download.

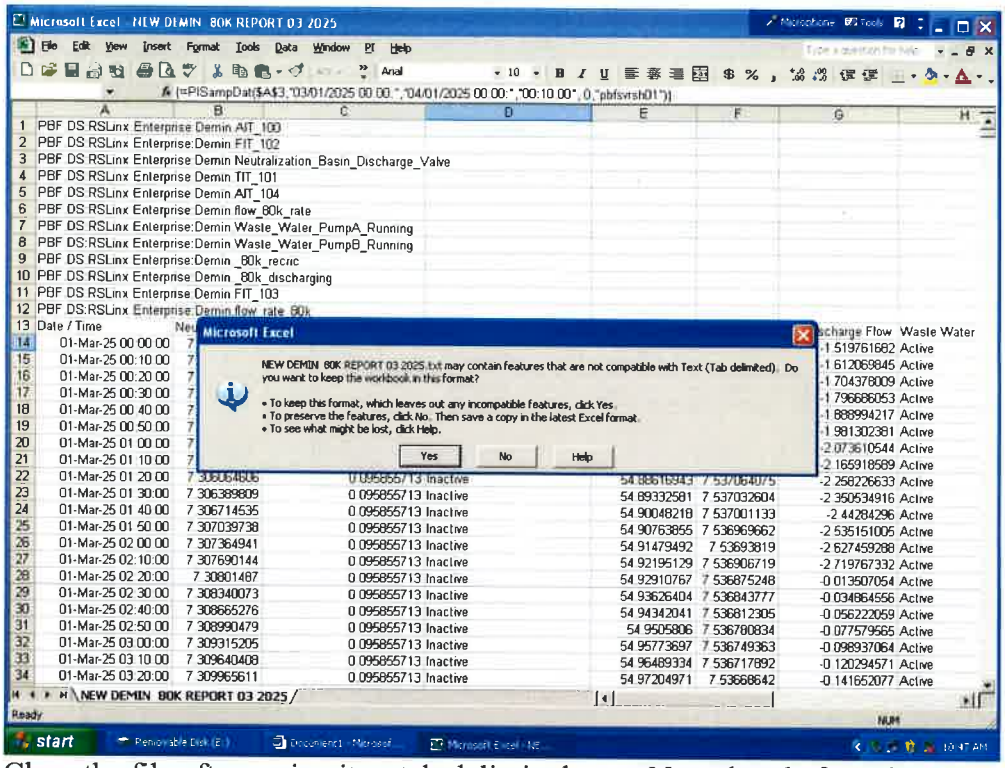
Note: The "Time Interval" can be increased or decreased to as little as 6 seconds ("00:00:06"), depending upon the user's reason for the data download. A second Excel workbook (that it discussed later in this document) for evaluating the monthly discharge data for the Discharge Monitoring Reporting is set-up to evaluate the data at 10-minute time intervals.



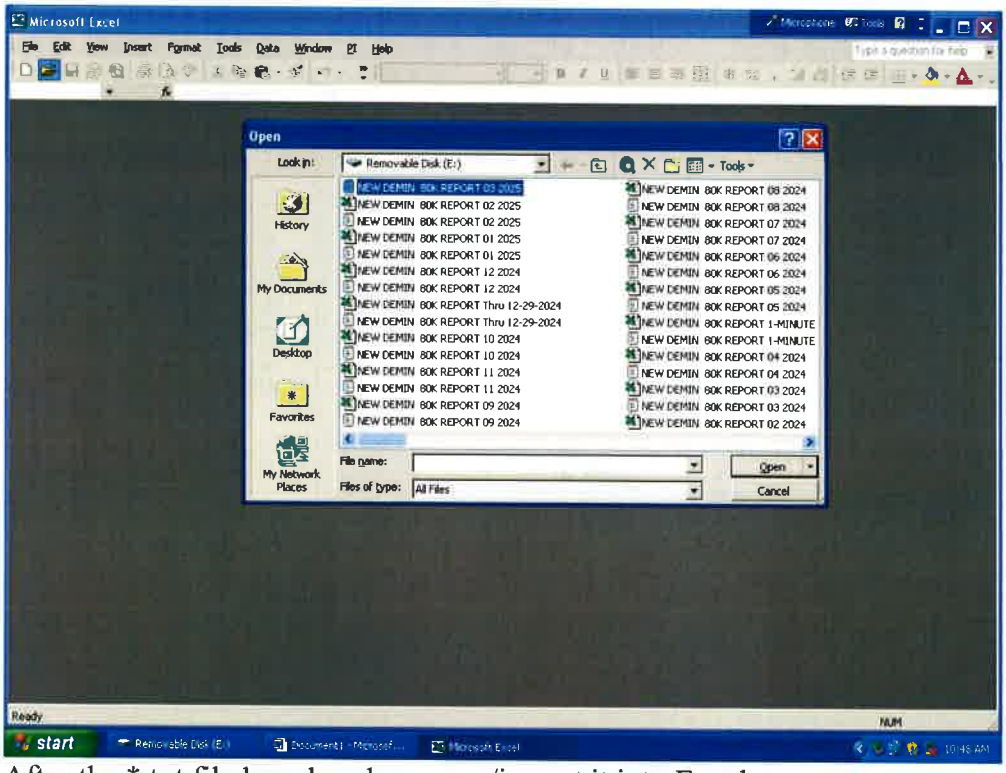
Note that underlying the value displayed in each cell, the cell contains the PI Datalink reference to that data point, so the data as currently configured can not be copied, pasted, or otherwise manipulated.



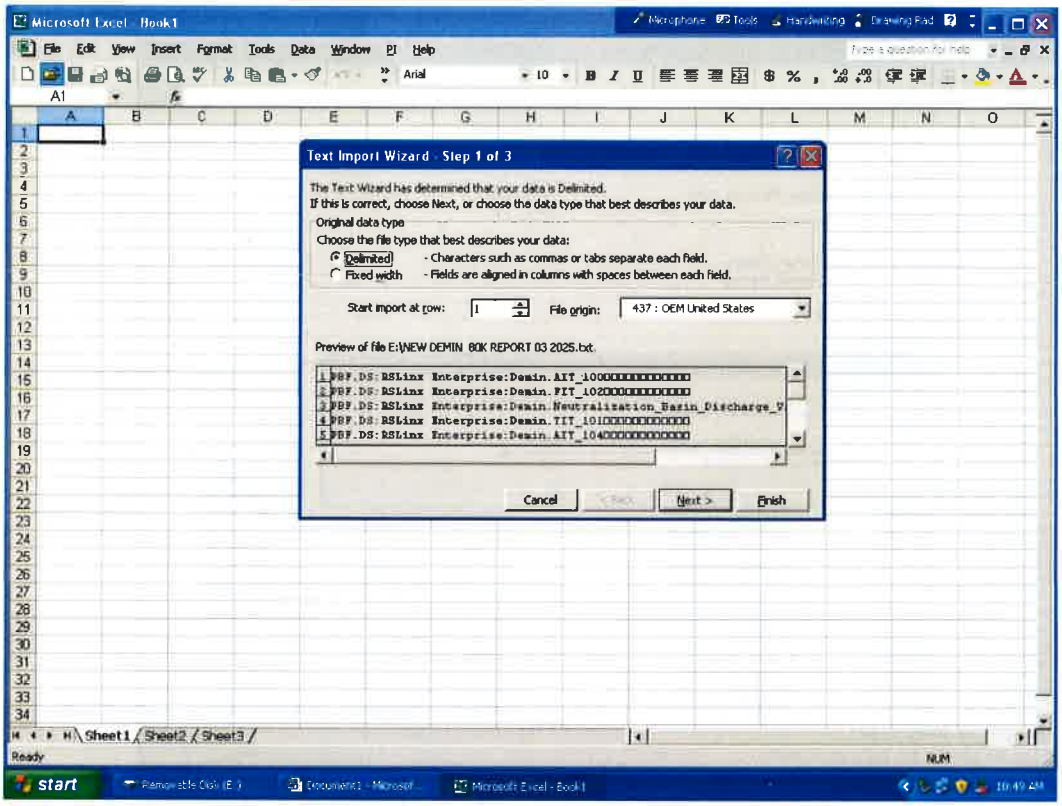
In order to be able to further evaluate the data, it must first be saved as a "Text (Tab delimited)" file. In the above screenshot, the data is being saved with the new filename for the month of the data: "NEW DEMIN 80K REPORT 03 2025.txt."



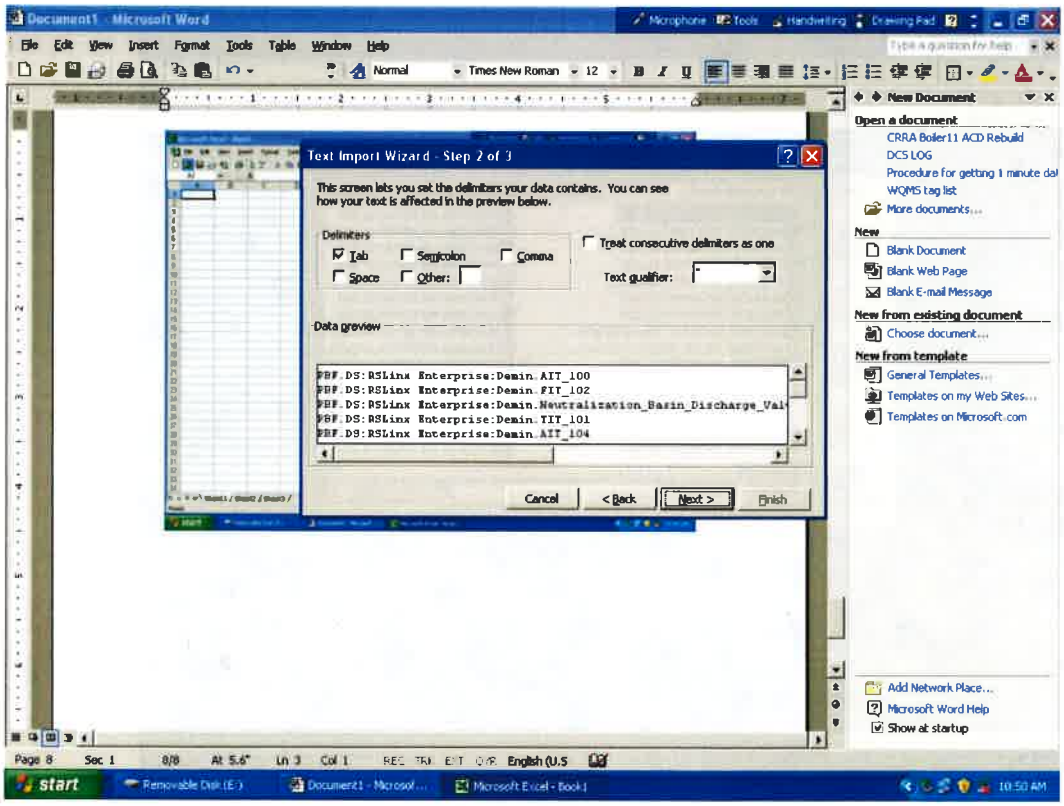
Close the file after saving it as tab-delimited text. Note that, before closing the file, Excel will ask "if you want to keep the workbook in this format." Click "Yes" in response to this question.



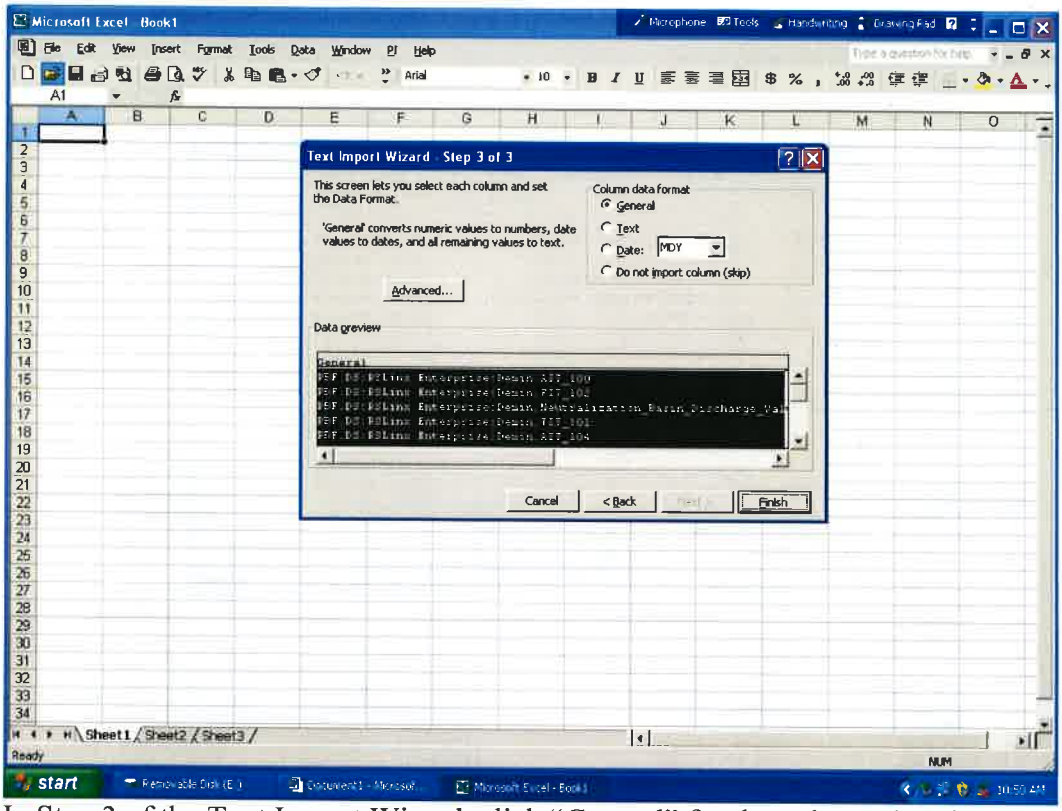
After the *.txt file has closed, re-open/import it into Excel.



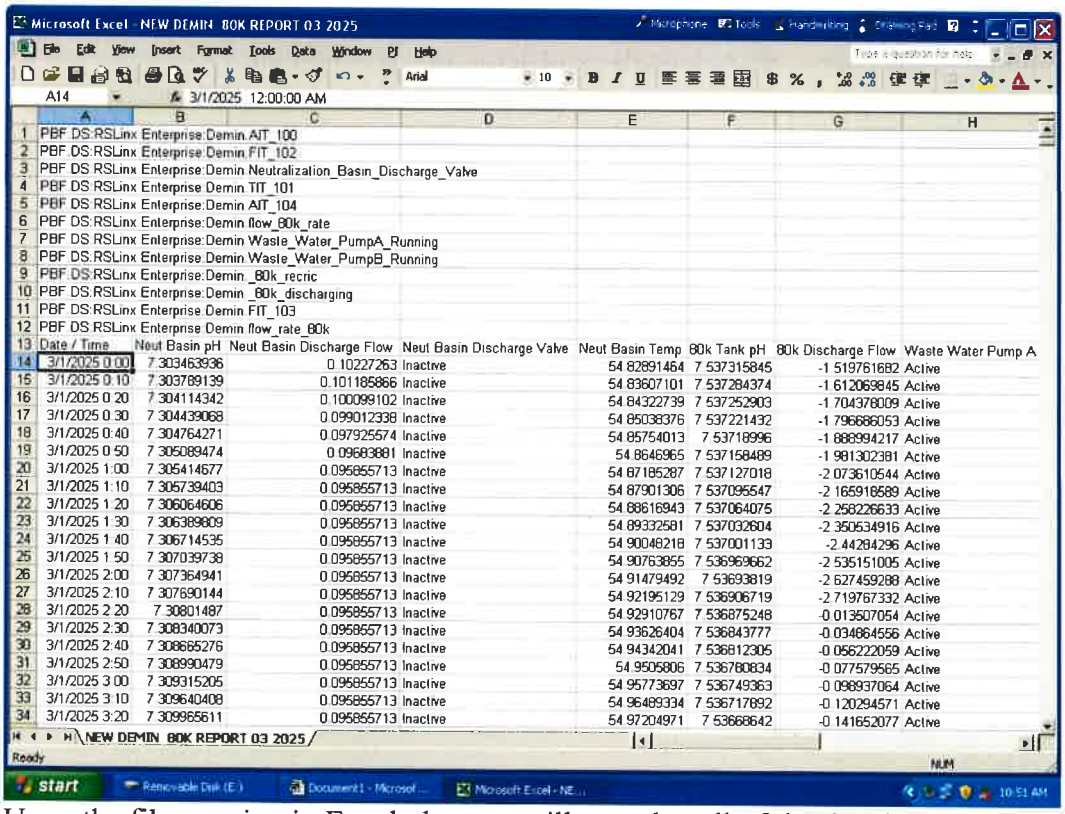
In Step 1 of the Text Import Wizard, click "Delimited" for the file type, then click "Next."



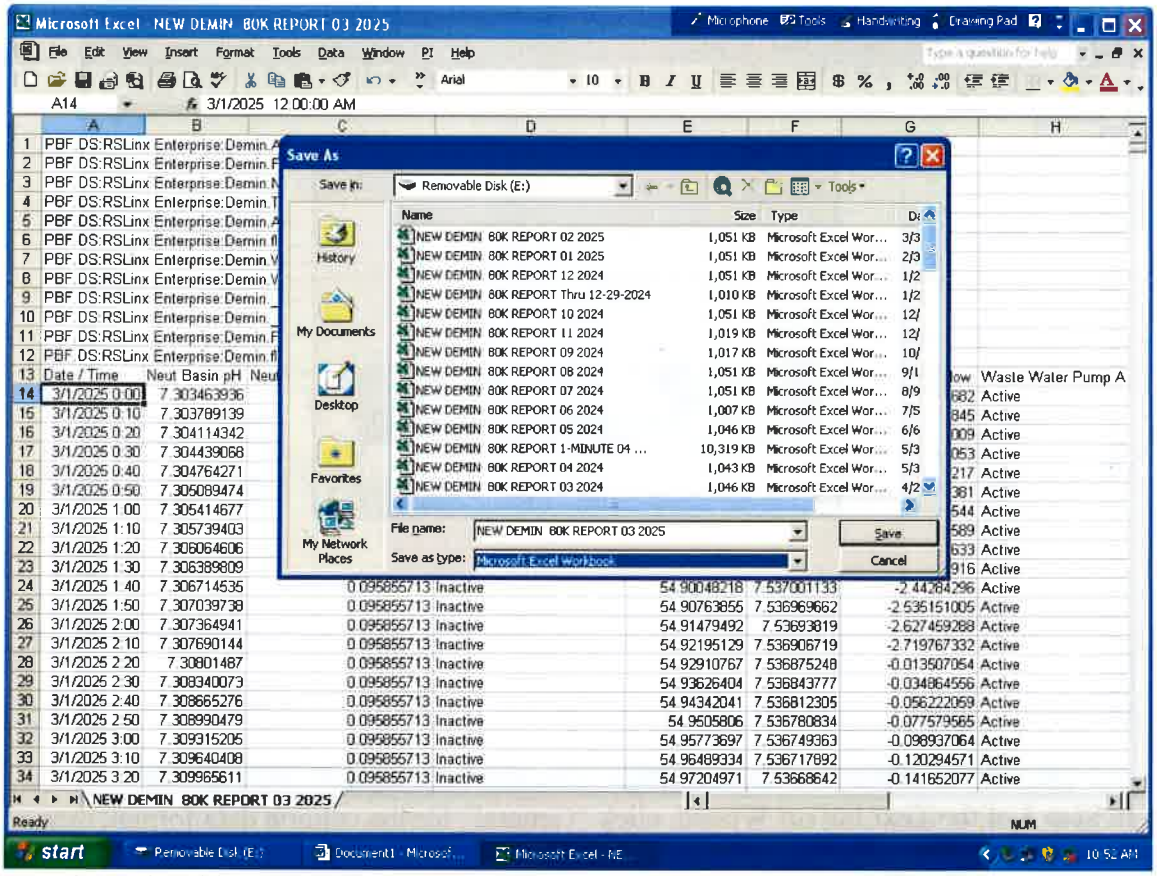
In Step 2 of the Text Import Wizard, click "Tab" for the delimiter type, then click "Next."



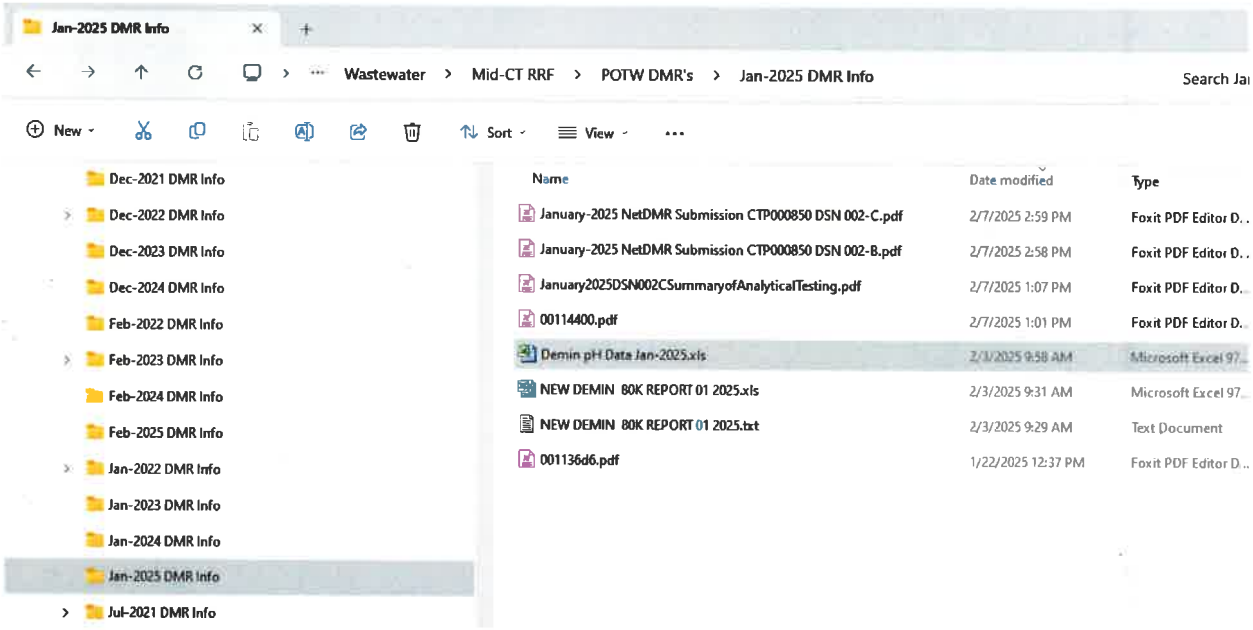
In Step 3 of the Text Import Wizard, click "General" for the column data format, then click "Finish."



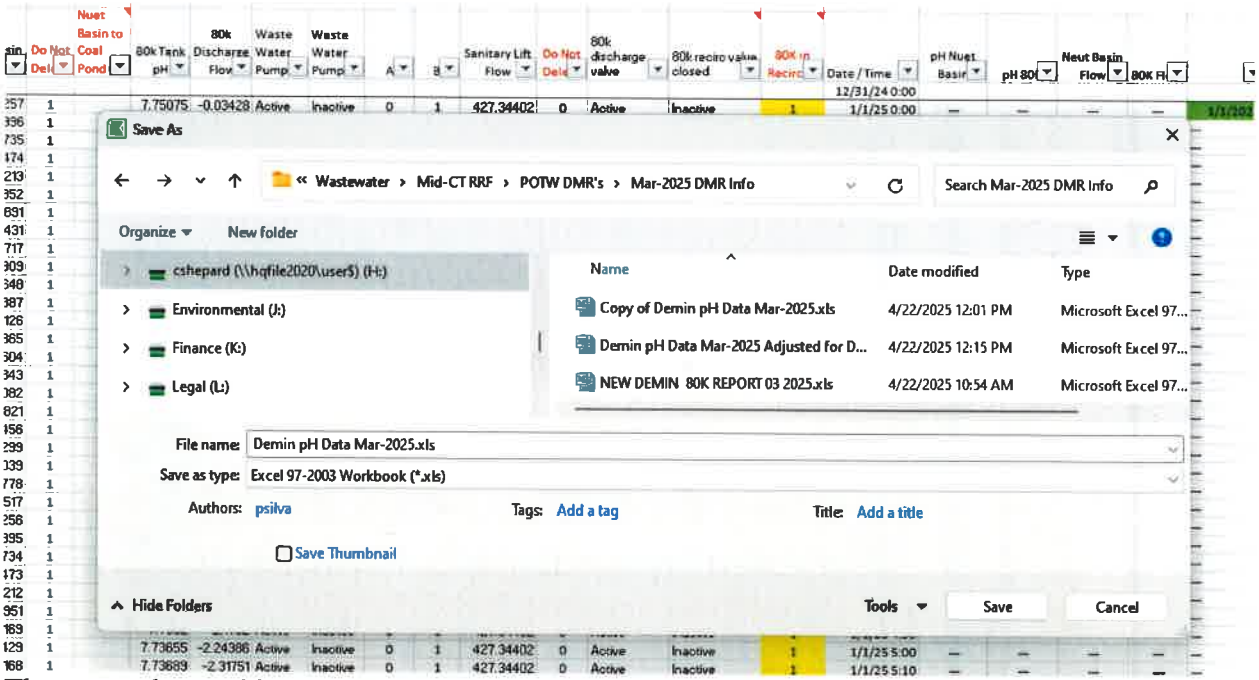
Upon the file opening in Excel, the user will note that all of the data in the cells is as displayed – there are no longer any PI Datalink references in the cells.



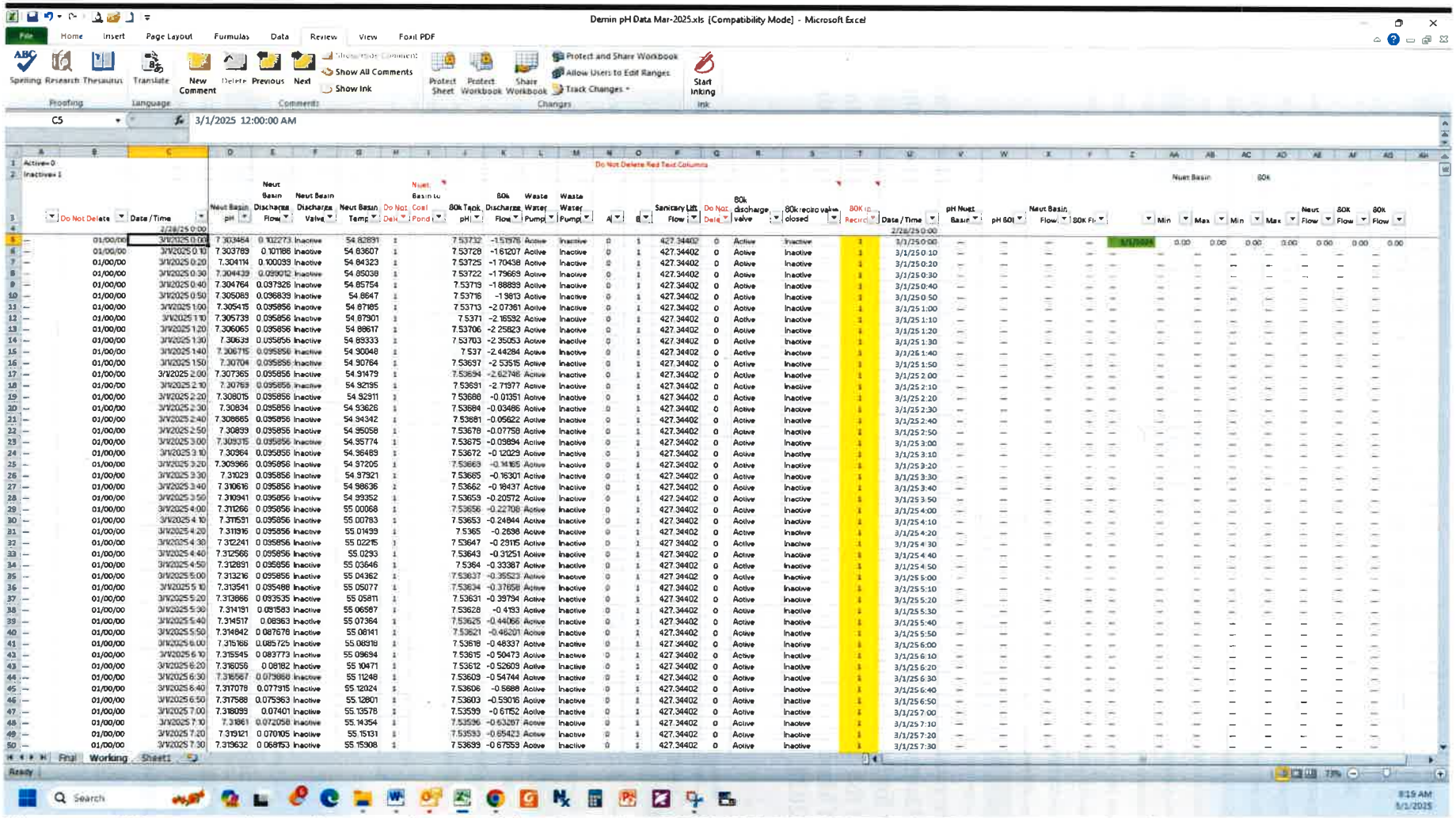
In order to be able to further utilize the data in Excel, save the file as a "Microsoft Excel Workbook" file. In the above screenshot, the data is being saved with the new filename for the month of the data: "NEW DEMIN 80K REPORT 03 2025.xls."



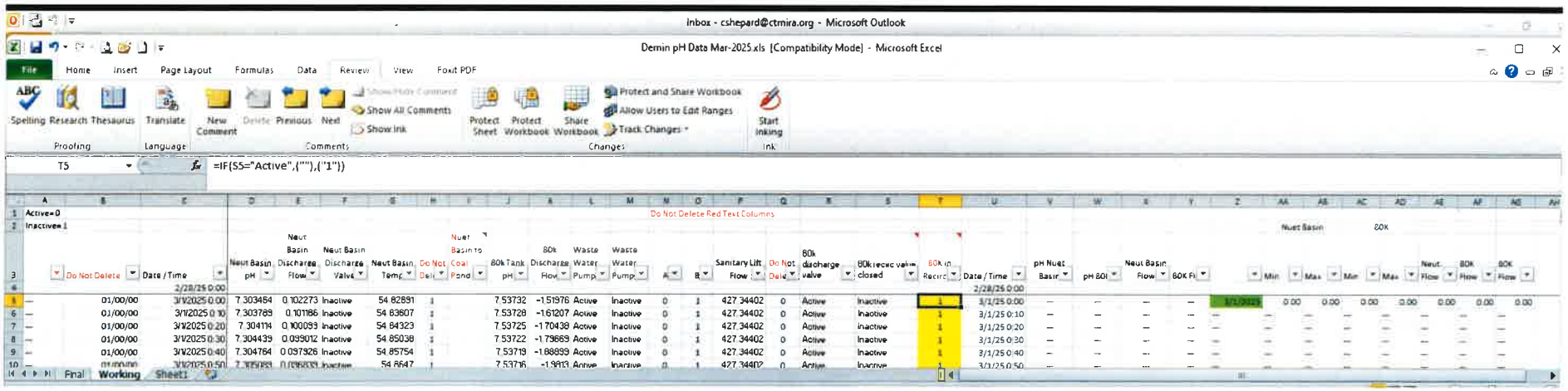
For use in evaluating the monthly downloaded discharge data, open the Excel workbook named "Demin pH Data (Mon-YYYY).xls," where (Mon-YYYY) represents the month and year for the previous month with the same number of days as, or more days than, the month of the downloaded discharge data. In this example, the downloaded data is for the month of March 2025, so the recommended file to open is the file for the month of January 2025, named "Demin pH Data Jan-2025.xls."



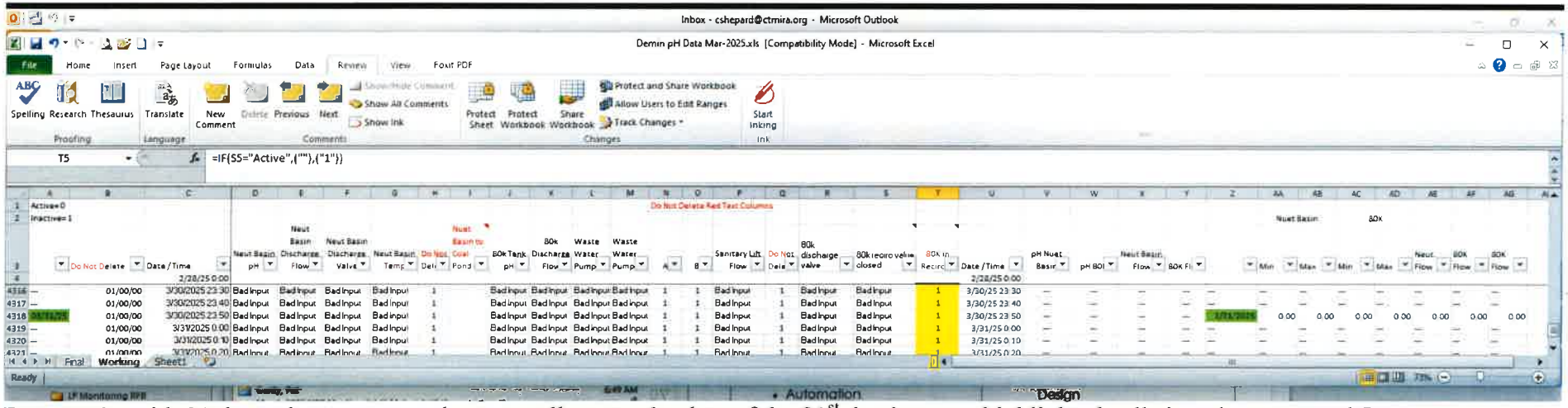
Then save the workbook with the name of the month and year corresponding to the downloaded discharge data to be evaluated. In this example, the workbook is saved under the name "Demin pH Data Mar-2025.xls."



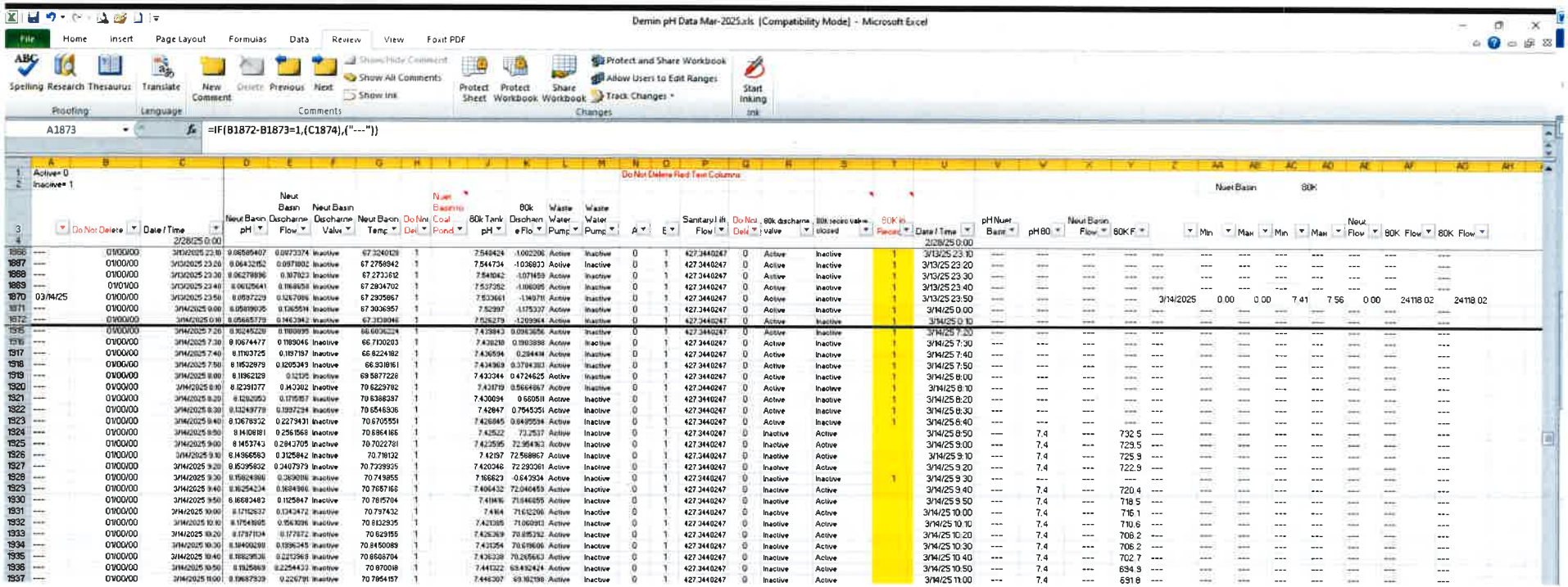
The user will have to select and copy columns of data from the "NEW 80K DEMIN REPORT MM YYYY.xls" file, and paste them into the corresponding columns of the "Demin pH Data (Mon-YYYY).xls" file in the worksheet named "Working."
Note that data is only pasted into the following columns of the "Working" worksheet: C, D, E, F, G, J, K. L, M, P, R, and S.



The user must manually enter the first day of the monthly data being summarized and evaluated in cell Z5, which is highlighted in green.



For months with 31 days, the user must also manually enter the date of the 31st day in green highlighted cells in columns A and Z.
In the example above, these two cells are in row 4318; however, the data in this example (March 2025) includes one less hour of time for the month due to springing ahead for daylight savings. Normally, the two cells for the 31st day that need to be manually entered are in row 4324.



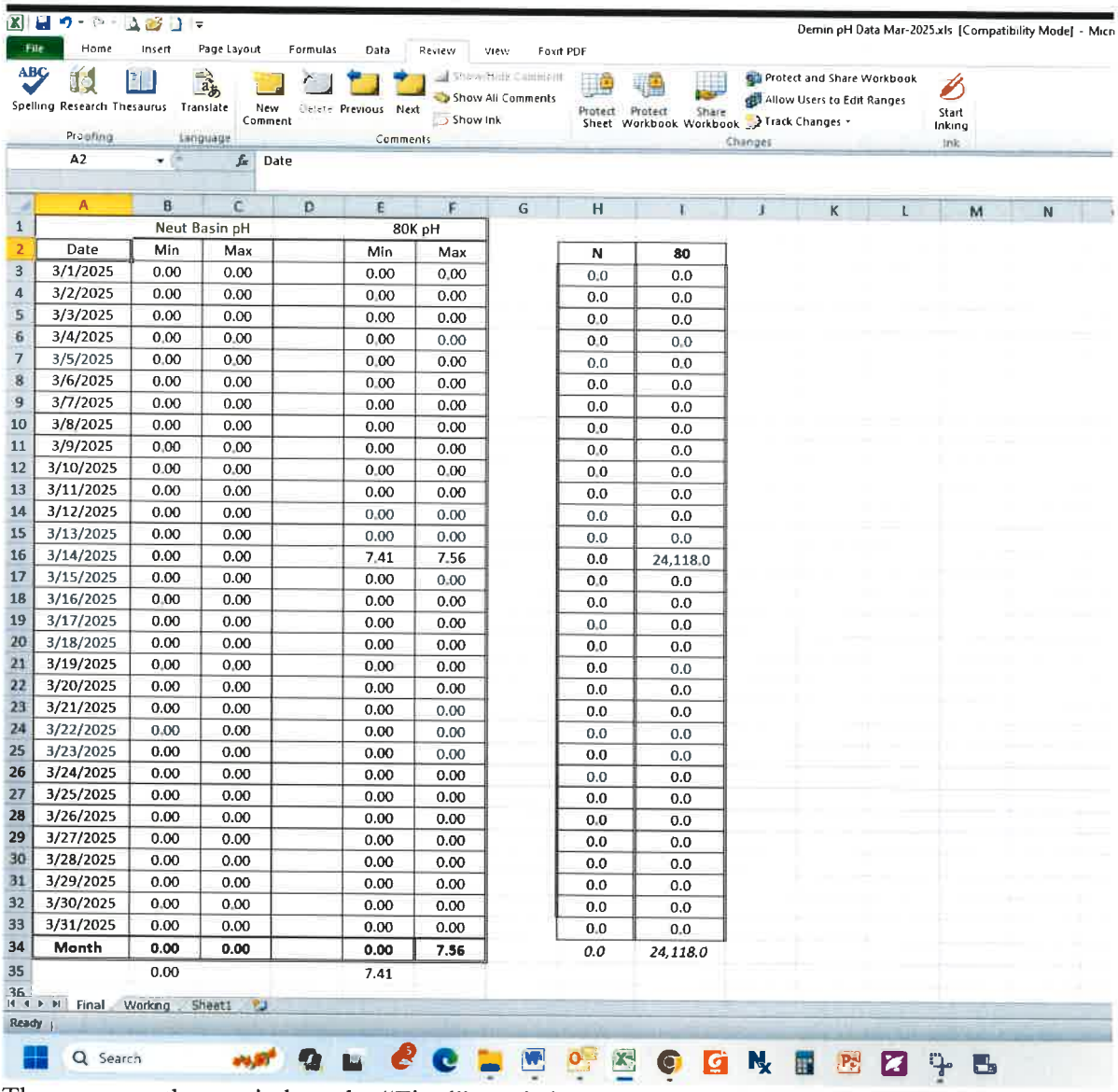
Columns H, I, N, O, Q, and T contain equations that evaluate the activity of discharge pumps and valves.

When it is determined that a discharge is active, then the pH and Flow data for each time increment of the discharge is summarized by the worksheet in columns V and X for the Neut Basin (i.e., Coal Pond Discharge), and columns W and Y for the 80K Discharge.

The pH range (minimum and maximum) and total daily flow for both the Neut Basin and the 80K Discharge are summarized for each day in columns Z through AG.

In the example above, the worksheet has determined that the 80K Discharge was activated beginning at 8:50 AM on 3/14/2025:

- Columns W and Y are populated with the recorded pH and flow rate for each time increment.
- Cells AC1870 and AD1870 indicate the minimum pH and maximum pH readings for the entire day of discharge (only when the discharge is active).
- Cell AF1870 calculates the estimated total flow for the day, in gallons (this is only an estimate – the reported flow for each day is based on flow meter readings that are taken at the beginning and end of each discharge event).



	A	B	C	D	E	F	G	H	I
1		Neut Basin pH			80K pH				
2	Date	Min	Max		Min	Max		N	80
3	3/1/2025	0.00	0.00		0.00	0.00		0.0	0.0
4	3/2/2025	0.00	0.00		0.00	0.00		0.0	0.0
5	3/3/2025	0.00	0.00		0.00	0.00		0.0	0.0
6	3/4/2025	0.00	0.00		0.00	0.00		0.0	0.0
7	3/5/2025	0.00	0.00		0.00	0.00		0.0	0.0
8	3/6/2025	0.00	0.00		0.00	0.00		0.0	0.0
9	3/7/2025	0.00	0.00		0.00	0.00		0.0	0.0
10	3/8/2025	0.00	0.00		0.00	0.00		0.0	0.0
11	3/9/2025	0.00	0.00		0.00	0.00		0.0	0.0
12	3/10/2025	0.00	0.00		0.00	0.00		0.0	0.0
13	3/11/2025	0.00	0.00		0.00	0.00		0.0	0.0
14	3/12/2025	0.00	0.00		0.00	0.00		0.0	0.0
15	3/13/2025	0.00	0.00		0.00	0.00		0.0	0.0
16	3/14/2025	0.00	0.00		7.41	7.56		0.0	24,118.0
17	3/15/2025	0.00	0.00		0.00	0.00		0.0	0.0
18	3/16/2025	0.00	0.00		0.00	0.00		0.0	0.0
19	3/17/2025	0.00	0.00		0.00	0.00		0.0	0.0
20	3/18/2025	0.00	0.00		0.00	0.00		0.0	0.0
21	3/19/2025	0.00	0.00		0.00	0.00		0.0	0.0
22	3/20/2025	0.00	0.00		0.00	0.00		0.0	0.0
23	3/21/2025	0.00	0.00		0.00	0.00		0.0	0.0
24	3/22/2025	0.00	0.00		0.00	0.00		0.0	0.0
25	3/23/2025	0.00	0.00		0.00	0.00		0.0	0.0
26	3/24/2025	0.00	0.00		0.00	0.00		0.0	0.0
27	3/25/2025	0.00	0.00		0.00	0.00		0.0	0.0
28	3/26/2025	0.00	0.00		0.00	0.00		0.0	0.0
29	3/27/2025	0.00	0.00		0.00	0.00		0.0	0.0
30	3/28/2025	0.00	0.00		0.00	0.00		0.0	0.0
31	3/29/2025	0.00	0.00		0.00	0.00		0.0	0.0
32	3/30/2025	0.00	0.00		0.00	0.00		0.0	0.0
33	3/31/2025	0.00	0.00		0.00	0.00		0.0	0.0
34	**Month**	**0.00**	**0.00**		**0.00**	**7.56**		*0.0*	*24,118.0*
35		0.00			7.41				

The user can then switch to the "Final" worksheet to review the data summary for the entire month.

In the example above, the summary indicates that there was no discharge from the Neut Basin during the month, and that the 80K Discharge only occurred on one day – 3/14/2025.

For the entire month, when the 80K Discharge was active:

- the pH of the discharge ranged from 7.41 (cell E35) to 7.56 (cell F34) – these values will be reported on the monthly Discharge Monitoring Report for the pH range during the month;
- the total estimated flow was 24,118 gallons (cell I34) – this value is only an estimate for comparison to the flow meter readings that are recorded at the beginning and end of each discharge event.

Attachment 3

ENGINEERED CONTROL & PERMANENT STRUCTURE INSPECTIONS AND LONG TERM GROUND WATER MONITORING MANUAL

Revision 2.0

Prepared for

Materials Innovation and Recycling Authority (MIRA)
South Meadows Property
Gate 20 Reserve Road & 300 Maxim Road, 100 Reserve Road
Hartford, Connecticut

Prepared by

TRC Environmental Corporation
Windsor, Connecticut

January 2018

ENGINEERED CONTROL & PERMANENT STRUCTURES INSPECTIONS AND LONG TERM GROUND WATER MONITORING MANUAL

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TRC Project No. 105333.009130
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1.0 INTRODUCTION

1.1 Background and Objectives

TRC Environmental Corporation (TRC) completed environmental investigations and remedial actions in accordance with Connecticut's Remediation Standard Regulations, Regulations of Connecticut State Agencies (RCSA) §§ 22a-133k-1 et seq. (RSRs), at the Materials Innovation and Recycling Authority (MIRA)-owned South Meadows Mid-Connecticut Facility located at Gate 20 Reserve Road & 300 Maxim Road, 100 Reserve Road Hartford, Connecticut (the "Property", "Site" or "Parcels"; note that the Property or Site as a whole consists of two legal parcels. A property location map is included as Figure 1.

At several areas across the Property, engineered controls (ECs) were utilized to address exceedances of the industrial/commercial direct exposure criteria (I/C DEC) and/or the "GB" pollutant mobility criteria (GB PMC) as defined in the RSRs. As provided for in each of the EC applications, which were prepared in accordance with 22a-133k-2(f)(2)(b) of the RSRs and approved by the Connecticut Department of Energy and Environmental Protection (CTDEEP), long term monitoring is required to ensure the ECs' continued effectiveness. Each of the EC areas is shown on Figure 2 and photographs of the ECs are contained in Appendix A.

In addition, concurrence was granted by the CTDEEP via email on December 19, 2017 for the designation of several features across the MIRA Site as permanent structures that render underlying soils inaccessible. These features are highlighted in a letter and associated attachments from TRC to the CTDEEP dated November 8, 2017 (included as Appendix B). As indicated in the Environmental Land Use (ELUR) Decision Document prepared for this site, the polluted soil does not pose a risk to human health, provided the soil is not exposed, excavated or disturbed such that people may come into contact with it, and the permanent structures, which are rendering such polluted soil inaccessible, are not disturbed in any manner. As required by Section 22a-133k-2(b)(3) of the Regulations of Connecticut State Agencies, the ELUR prohibits inaccessible soil from being exposed as a result of excavation or other intrusive activities. Should the permanent structures be removed in the future such that the underlying soils are no longer rendered inaccessible, the applicable regulatory processes are required to be followed to ensure the protection of human health and the environment. The locations of the permanent structures are shown on Figure 3.

The objectives of this document are to:

- outline the procedures and frequency for performing inspections as described in each of the EC applications;
- outline the procedures and frequency for performing inspections of the permanent structures;
- outline the procedures and frequency for conducting long term ground water monitoring (if any was required) as described in each of the EC applications; and
- describe the reporting requirements to document the above-referenced activities.

1.2 Summary of Engineered Control Areas

The following sections describe each of the engineered control areas. Note that a key component of each of the ECs is the implementation of ELURs that will ensure that the Parcels are not used in a manner that disturbs the ECs or polluted soil. These ELURs are in the process of being implemented across the Site as of the date of publishing this document. Therefore, each of the EC areas presented in the following sections have been identified in terms of their eventual ELUR Subject Area designations and their current area of concern (AOC) designations, as outlined in TRC's March 2016 Draft Final Verification Report. In addition, each of the Subject Areas/AOCs, their primary contaminants of concern and general long term monitoring requirements are summarized in Table 1.

1.2.1 Subject Area C – Former Mercury Boiler Room Addition

Subject Area C (see Figure 4) consists of the 1927 Former Mercury Boiler Room Addition (1927 BRA). The 1927 BRA was a former power generating addition to the original plant that heated mercury in a boiler that created a pressurized vapor to drive electric turbines. The footprint of the 1927 BRA foundation is approximately 60 feet by 65 feet. The boiler was operated from 1928 until 1961, when the mercury was removed and shipped off site and the boiler was also removed from the Site. The remaining building was decontaminated and demolished down to the remaining concrete-reinforced foundation slab in 2002 and 2003 by TRC.

Arsenic is present in soils within Subject Area C at concentrations that exceed the I/C DEC, but that do not exceed the GB PMC. Mercury has also been detected in Subject Area C soils at concentrations that exceed the I/C DEC and GB PMC. Based on these findings, it was determined that, with some alterations, the concrete reinforced slab would serve as an engineered control in order to render underlying soils environmentally isolated and inaccessible.

The EC for Subject Area C consists of the reinforced concrete slab, which will remain permanently in place, measuring from 8" to 25" in thickness. This slab was observed to be in good condition; with no visible cracks. The slab is heavily reinforced and well supported by thick grade beams supported on concrete caissons. As part of the EC, the concrete slab and sub-grade components were improved. Two sumps within the footprint of the slab and the former elevator pit were decontaminated, filled with gravel and ultimately paved over. The area overlying the concrete slab was regraded and the surface was repaved to improve storm water runoff away from the concrete slab and impacted soil below.

1.2.2 Subject Area D – Area PBF-3/FD Fan Area

Subject Area D (see Figure 5) is located within the east-central portion of the PBF and is the site of a former transformer switchyard (Area PBF-3) that was in operation from the 1920s to 1970s. Area PBF-3 had been impacted by surface releases of PCB-containing oil over its operational history. The majority of the PBF-3 area was remediated by excavating PCB-impacted soil from depths ranging from 2.5 to 6 feet below the original grade and transporting the waste to

permitted disposal facilities. A small area of PCB-impacted soil identified as PBF-3 Excavation Area 3B of PCB-impacted soil, measuring approximately 25 feet by 35 feet, remains at the Site.

Small portions along the southern and western boundaries of Excavation Area 3B were excavated to 2.5 feet below grade; however, PCB-impacted soil in the remainder of the excavation was discovered at deeper elevations (approximately eight feet below grade). It was determined that excavation of the remaining polluted soil at depth located beneath the PBF building, active transformers, and structural foundations would pose a safety and exposure risk to workers involved in the remediation, potentially cause permanent structural damage to the building / equipment foundations and would be cost prohibitive. As such, it was determined that an EC would be required in order to allow for PCB-polluted soils to remain in the area identified as the "FD Fan" area.

Plans for an EC were developed to leave the PCB-contaminated soil in place by applying a reinforced concrete surface cap over the impacted soil to achieve compliance with the I/C DEC and GB PMC. A non-woven geotextile was initially laid down directly on top of the base and side walls of the excavated area. A layer of orange polypropylene netting was then applied on top of the geotextile. This barrier layer was covered with suitable compacted backfill material and an 8-inch thick reinforced concrete pad was placed on top of the filled area. "M_L" marks were pressed into the concrete slab to warn against demolition of the slab. The concrete slab was sealed with a low permeability coating and the contact joints between the concrete slab and existing structures were sealed to prevent water intrusion, but also to allow the concrete pad to expand and contract.

1.2.3 Subject Area G-a – Area 3

A portion of Subject Area G-a referred to as "Area 3-1" (see Figure 6) covers approximately 3.8 acres, and is bounded to the east by the flood control dike and to the west by Reserve Road. The Charter Oak Landing (river-front park) access road transects Area 3-1. Investigations conducted within Area 3-1 between 1998 and 2013 led to the determination that lead, arsenic, ETPH and PAH impacts exist throughout Area 3-1. Soil excavations were completed in 2009 to excavate soils impacted with arsenic and lead at concentrations in excess of the I/C DEC. Since the time that the arsenic and lead-impacted soils were remediated, subsequent investigations had determined that the ETPH and PAH impacts were present throughout the area and required remedial activities to comply with the applicable criteria.

The EC for this portion of Subject Area G-a was designed to eliminate exposure pathways to ETPH and PAH-impacted soils which will remain in place. The EC varied within three distinct portions of Area 3-1 and consisted of the following:

- Placement of an orange geotextile warning layer covered by 2-feet of suitable clean backfill material over an approximate 86,000 square foot area which extends from just north of the Gate 20 access road, northwest under the Charter Oak Bridge and extends west until approximately 80 feet east of the Charter Oak Landing access road.
- Placement of HDPE pavers filled/covered with 4-inches of topsoil along the southeastern edge of the Charter Oak Landing access road (approximately 18,300 square feet).

- Excavation to a depth of two feet, installation on an orange geotextile warning layer and placement of the excavated material over the geotextile layer in the area to the northwest of the Charter Oak Landing access road (approximately 16,800 feet).

Large trees that line the park access road, as well as larger trees to the south and east of the access road were not disturbed as part of the construction of the EC. Tree wells were placed around the mature trees to allow for the landscaping to remain intact.

1.2.4 Subject Area I – Fuel Line Delineation Area 2

Subject Area I consists of the Fuel Line Delineation Area 2 portion of the Site located southeast of the jet turbines and north of the Coal Pond (see Figure 7). The fuel line was formerly part of a system of lines that transmitted fuel from the barge off-load dock along the Connecticut River to the large aboveground storage tanks located in the former fuel farm in the western portion of the Site.

Soil within Subject Area I exhibits concentrations of ETPH in soil in excess of the PMC and I/C DEC. The area impacted by ETPH in soil that required remediation measures approximately 20 feet wide by 100 feet long and is covered with asphalt pavement. The presence of numerous underground utilities, the proximity of the area to the jet turbines and the coal pond, as well as the depth of the impacts did not allow for excavation without compromising the integrity of nearby structures and presenting a significant safety concern for the remediation contractor. It was determined that the best remedial option for this release was to construct an impermeable geo-membrane EC to be in compliance with the GB PMC and I/C DEC.

The EC consists of several layers to prevent direct exposure and infiltration of water through the ETPH-impacted soils of Subject Area I. Approximately 6-inches of sub-base material (mason sand) were initially placed within the excavation area. Following compaction testing and grading of the mason sand layer, a non-woven geotextile layer was placed over the initial sub-base layer to protect the impermeable 40 mil linear low density polyethylene (LLDPE) flexible geo-membrane layer which was placed over it to prevent the downward migration of infiltrating waters into the ETPH-impacted soils below. In areas where the geo-membrane surrounded the sewer manholes, monitoring wells or the steel sheet piles along the coal pond, the membrane was cut out to fit about the structure and then sealed around said structures to prevent the infiltration of rain and surface waters. A geo-composite drainage layer was subsequently installed to redirect infiltrated waters to the outer edges of the area along a 1% slope. Between 12-inches and 18-inches of screened Connecticut Department of Transportation (DOT) Gradation C gravel base was placed in 6-inch lifts over the geo-membrane and graded and compacted in a manner that would allow for the placement of a total of 9-inches of pavement. An approximately 6-inch layer of Class IV bituminous concrete pavement was placed immediately above the compacted sub-base material. This was followed by 3-inches of Class I bituminous concrete to match the pre-remediation grade.

1.2.5 Subject Area M – WPF Storm Water Detention Basin

Subject Area M consists of a storm water detention basin constructed in 1987, as part of the overall construction of the WPF, to manage and maintain the storm water runoff for the entire facility. The basin is located in the northwestern portion of the WPF property (see Figure 8).

Consistent with findings from across the WPF, arsenic was reported at elevated concentrations (in excess of the I/C DEC, but not the GB PMC) in the soils at the bottom of the basin. In addition, beryllium was detected in the soils at concentrations that exceed the I/C DEC. It was determined, based on the depth to which arsenic impacts occur in soils at the WPF, that in order for the soil to be in compliance with the I/C DEC, the soil needed to be rendered inaccessible.

The EC for the basin included excavation, installation of a woven fabric, installation of a crushed stone layer on the bottom of the basin, erosion controls and updated access controls. The basin was excavated to a depth of six inches below the original grade in order to remove accumulated sediments from the storm water system and to allow for the placement of the geotextile and gravel layer. The slopes of the basin were left largely undisturbed in an effort to maintain slope stability and minimize erosion. A continuous layer of woven filter fabric (orange to provide a clear demarcation layer) was laid down across the basin bottom and a 6-inch layer of 1-inch crushed stone was placed on top of the woven fabric. There are four inlet pipes that transfer storm water into the basin, each of which was outfitted with a 10-foot rip rap splash pad beyond the extent of the pipe to minimize erosion of the stone barrier. Rip rap slopes present along a portion of the basin serve to alleviate access to underlying impacted soils, as does the heavy vegetation along the remainder of the slopes. Note that this heavy vegetation is not to be removed, as it serves as an access control.

1.2.6 Subject Areas N, O and P – WPF Areas 3, 1 and 2

Prior to the construction of the WPF in the 1980s, fill was placed in the area that consisted of soil mixed with coal ash. Environmental investigations that have taken place at the WPF have indicated that arsenic is present in the fill at varying depths, including to depths of up to 18 feet below grade. Concentrations of arsenic in the soil have been reported to exceed the I/C DEC, but not the GB PMC.

The majority of the arsenic impacts across the WPF are rendered inaccessible with the use of clean material and pavement, however, there are three landscaped areas (i.e., Subject Areas N, O and P) identified as being of concern relative to reported arsenic concentrations in excess of the I/C DEC. To eliminate the possibility of exposure, the three areas were remediated with the use of an engineered control consisting of high density polyethylene (HDPE) pavers that render the arsenic-impacted soil inaccessible. Subject Areas N, O and P are depicted on Figure 2.

To maintain the aesthetic quality of the areas and save the mature trees, the engineered control was designed to allow for the landscaping, which is highly visible from Maxim Road, to remain intact without having to change the surface grades by as much as four feet. It also allowed for the utilities in Subject Areas N and P to remain undisturbed.

The EC includes two feet of clean backfill material over the impacted soil which was covered with 4 inches of topsoil, and a continuous layer of HDPE pavers as follows:

- Subject Area O - Soils were excavated to 2.25 feet below grade, backfilled with two feet of clean fill, and then covered with the HDPE pavers and 4 inches of topsoil.
- Subject Areas N and P - Due to the presence of underground utilities, excavation to 2.25 feet below grade was not possible. As such, the HDPE pavers were placed on top of the existing soil and two feet of suitable backfill and 4 inches of topsoil were placed over the pavers.

Each paver is 19.75 inches by 15.25 inches by 1.75 inches thick that interlock to form a continuous barrier across the remediated areas. The pavers have hexagonal-shaped cells that are 95 percent open at the top and 46 percent open at the bottom to allow for infiltration, irrigation, and planting of grass and shrubs. Tree wells were placed around the mature trees to allow for the landscaping to remain intact.

1.3 Summary of Permanent Structures

The following table (Table 2) provides a summary of the 28 features across the Site that have been designated as permanent structures and that shall not be disturbed, as they render the underlying soils inaccessible. As indicated above in Section 1, should the permanent structures be removed in the future such that the underlying soils are no longer rendered inaccessible, the applicable regulatory processes are required to be followed to ensure the protection of human health and the environment.

Table 2 – Summary of Permanent Structures

Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Figure 3 Map Reference
Power Block Facility (PBF): 100 Reserve Road			
Utility Tower Foundation	Northwestern Corner of Site	Subject Areas A-1 and G-a	1
Billboard Sign Foundation	South of Charter Oak Bridge / Northeastern Part of Site	Subject Areas A-1 and G-b	2
Large Electrical Pole Foundations	South of Charter Oak Bridge in Grassy Area	Subject Areas A-1 and G-b	3
Utility Tower Foundation	Eastern Side of Site Near Concrete Dike Wall	Subject Area A-1	4
Electrical Equipment Foundations	23 kV Switchyard, 115 kV Switchyard and the Former Switchyard (All in Central Portion of PBF)	Subject Areas A-1, A-2, E, F-1 and F-2	5

Table 2 – Summary of Permanent Structures (continued)

Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Figure 3 Map Reference
Foundation of Backflow Preventer Shed	On Roadway Adjacent to 115 kV Switchyard	Subject Area A-1	6
Utility Tower Foundations	Far Eastern Side of Former Fuel Farm	Subject Area H-1	7
Large Electrical Pole Foundation	In Asphalt Area North of Jet Yard	Subject Area A-1	8
Fuel Oil Aboveground Storage Tank (AST)	Former Fuel Farm	Subject Area H-1	9
Foundation of Pump House Near Fuel AST	Former Fuel Farm	Subject Area H-1	10
Concrete End-wall	Far Southeastern End of Former Fuel Farm	Subject Area A-1	11
Concrete Pads and Foundations and Jet Turbine Foundations	Jet Yard	Subject Area A-1	12
Truck Scale	Gate 40 Roadway, South of Coal Pond/Coal Pile	Subject Area A-1	13
Coal Pond/Coal Pile Liner and Concrete "Pillows"	Southern Portion of PBF	Subject Areas A-1 and J	14
Two Concrete Structures Along the Northern Side of the Coal Pond	Coal Pond/Coal Pile in Southern Portion of PBF	Subject Areas A-1 and J	15
Concrete Portions of the Former Coal Conveyor System	Northeastern Portion of Coal Pond/Coal Pile	Subject Areas A-1 and J	16
Concrete Foundations Associated with the Conveyor System	Southeastern Portion of the PBF (East/Northeast of the Coal Pond/Coal Pile)	Subject Area A-1	17
Various Concrete Pads Adjacent to the Southeastern Corner of the Main PBF Building	Southeastern portion of PBF	Subject Area A-1	18
Three Aboveground, Vertical Storage Tanks	Off of the Southeastern Corner of the Main PBF Building	Subject Area A-1	19

Table 2 – Summary of Permanent Structures (continued)

Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Figure 3 Map Reference
Concrete Structure	Across the Roadway (East/Northeast) from the Various Concrete Pads	Subject Area A-1	20
Concrete Flood Dike Wall	Runs Along the Eastern/Northeastern Portion of the PBF (In the Area of the Main PBF Building)	Subject Area A-1	21
Silo Foundation	East/Northeast of the Main PBF Building	Subject Area A-1	22
Waste Processing Facility (WPF): 300 Maxim Road			
Concrete Foundations Underlying the Ventilation Equipment	North Side of WPF Building	Subject Area A-1	23
Concrete Foundations Underlying the Thermal Oxidizer Equipment	North Side of the WPF Building	Subject Area A-1	24
Concrete Truck Ramp	East Side of the WPF Building	Subject Area A-1	25
Concrete Foundations Underlying the Ventilation Equipment	East Side of WPF Building	Subject Area A-1	26
Truck Scales	South of WPF Building	Subject Area A-1	27
Truck Scale	Southwest of the WPF Building Near Maxim Road	Subject Area A-1	28

2.0 INSPECTIONS

The following Sections describe the specific inspection activities to be conducted within each Subject Area/AOC and the frequency at which such EC and permanent structure inspections will occur.

The overall EC inspection and long term ground water monitoring program is summarized in Tables 3 and 4. Photographs of each of the EC areas are presented in Appendix A for reference. Photographs of each of the permanent structures are included in the attachments to the reference materials contained in Appendix B. Each inspection should be documented on the forms included in Appendix C. Photographs documenting conditions observed during each inspection will be taken and attached to the field forms.

2.1 Subject Area C – Former Mercury Boiler Room Addition

In accordance with the approved EC application, inspections will be performed by TRC on a semi-annual basis for as long as the EC remains in place within the area shown on Figure 4. The inspections will be performed to determine if the bituminous concrete and concrete are in good condition and that no cracks are forming that might allow water to infiltrate the engineered control.

2.2 Subject Area D – Area PBF-3/FD Fan Area

As proposed in the EC application, inspections will be performed on a semi-annual basis by TRC within the area shown on Figure 5. Inspections will verify that: the concrete is in good condition and that no cracks are forming; that the surface-applied waterproof coating is in good condition; that joint seals at each of the contact points with other concrete structures are intact and in good condition, and that signs bearing the M_L mark are still readily visible and legible.

2.3 Subject Area G – Area 3

Inspections will be performed on a semi-annual basis by TRC within the area shown on Figure 6. Inspections will be performed to determine that the surface of the remediated area is in good condition and that there is no evidence of surface erosion that might affect the engineered control.

2.4 Subject Area I – Fuel Line Delineation Area 2

The re-paved area shown on Figure 7 will be inspected semi-annually for evidence of subsidence which may indicate potential damage to the geomembrane system.

2.5 Subject Area M – WPF Storm Water Detention Basin

Inspections will be performed on a semi-annual basis by TRC within the area shown on Figure 8. Inspections will be performed to determine that the crushed stone layer and underlying filter fabric in the Basin bottom have not been disturbed or if there is fabric exposed that would

indicate damage. The side slopes of the Basin will be inspected for damage to the stone riprap layer or other erosion that may cause the underlying soil to be exposed. The four outlet ends of the four pipes discharging into the Basin will be inspected for any disturbance of the stone riprap splash pads or other erosion damage.

2.6 Subject Areas N, O and P– WPF Areas 3, 1 and 2

Inspections will be performed on a semi-annual basis by TRC within the areas shown on Figure 2. Inspections will be performed to determine that the surfaces of the remediated areas are in good condition and that there is no evidence of surface erosion that might affect the EC.

2.7 Permanent Structures

To ensure the continued presence and competency of the permanent structures to render underlying soil inaccessible, each of the structures on the list will be inspected on an annual basis (ideally during the same deployment in which the long term ground water monitoring and semi-annual EC inspections are occurring).

2.8 Soil Management Plan

Should future inspections of the ECs or permanent structures indicate the need for maintenance activities, such activities should be conducted in accordance with the procedures outlined in the EC applications and in accordance with the document entitled *Soil Management Plan: Connecticut Resources Recovery Authority South Meadows Property (TRC, 2014).*

3.0 GROUND WATER SAMPLING

3.1 Long Term Ground Water Monitoring Program

With the exception of Subject Areas N, O and P, long term ground water monitoring was a component of the EC application approval for each area. The long term ground monitoring schedule is presented as Table 4. This table also summarizes the monitoring wells to be sampled within each area and the parameters for which each sample will be analyzed. All of the existing onsite monitoring wells are shown on Figure 2. While not specifically called for by any of the EC applications, monitoring for the presence of light non-aqueous phase liquids (LNAPL) will also be performed at select wells (as indicated in Table 4) across the Site. As indicated in the EC applications for Subject Areas C, D, G, I and M, the focus of the continued ground water monitoring will be to determine if pollutants in soil are mobilizing and, if detected, to determine if the concentrations exceed the surface water protection criteria (or approved alternative surface water protection criteria) or pose a risk to human health and the environment. At Subject Areas C and D, two years of quarterly ground water monitoring were proposed, followed by annual ground water sampling, should no impacts be identified during the initial two years of quarterly ground water sampling. Since no impacts have been identified during the two years of quarterly ground water sampling, the wells within Subject Areas C and D will be sampled annually, along with the wells in the remaining areas where annual ground water monitoring was approved by the CTDEEP.

3.2 No Purge Ground Water Sampling

Where possible and practical, ground water samples will be collected using a no-purge (passive) grab sampling device. Samples collected in this manner are obtained directly from the screened interval of the well without the need to purge the well prior to sampling. Specifically, ground water samples will be collected with the HydraSleeve no-purge sampling device in accordance with the standard operating procedures (SOPs) and field manual included in Appendix D.

In accordance with the Hydrasleeve sampling SOPs, the specific size and setup of each Hydrasleeve sampling device will vary depending on the diameter of the well, the length of the screened interval and the available column of water present within the well at the time of sampling. The specific Hydrasleeve setup used at each well will be recorded in the field notebook. Should the Hydrasleeve no be a practical technology to use given well size or water column constraints, low-flow purging and sampling will be conducted as an alternative (see below).

In accordance with the protocols, prior to sampling, the water level of each monitoring well will be measured to the nearest 0.01 ft. with an electronic water sensing device and recorded in a field notebook to allow for a determination to be made regarding the placement of the intake tubing or pump. The water level indicator will be decontaminated with deionized water prior to each use unless visual observations (e.g., oil, odors) indicate that additional decontamination is necessary. At select wells (see Table 4), the presence or absence of LNAPL will be determined using an interface probe (IP) which will be decontaminated between use in wells. LNAPL measurements will also be recorded in the field notebook. Note that the presence of LNAPL in a well would

preclude the use of the Hydrasleeve sampling device and the well would require sampling by alternative means.

3.3 Low-Flow Ground Water Sampling (Alternative Sampling Method)

Ground water samples not collected in the manner described above will be collected in accordance with the procedures outlined in U.S EPA's Region 1 SOP for Low-Flow Purging and Sampling and TRC SOP RMD- 009. LNAPL gauging will be conducted in accordance with TRC SOP RMD-004. The ground water sampling SOPs and LNAPL gauging SOP are also included in Appendix D. The low-flow ground water sampling field forms are included in Appendix E.

In accordance with the protocols, prior to sampling, the water level of each monitoring well will be measured to the nearest 0.01 ft. with an electronic water sensing device and recorded in a field notebook to allow for a determination to be made regarding the placement of the intake tubing or pump. The water level indicator will be decontaminated with deionized water prior to each use unless visual observations (e.g., oil, odors) indicate that additional decontamination is necessary. At select wells (see Table 4), the presence or absence of LNAPL will be determined using an IP which will be decontaminated between use in wells. LNAPL measurements will also be recorded in the field notebook. Note that Table 5, which shows all of the existing wells at the site, has been included in this document for reference.

Wells in which samples will be analyzed for VOCs will be purged and sampled using a bladder pump outfitted with new polyethylene tubing (the tubing will be dedicated to each location to eliminate the potential for cross-contamination between wells). All other wells will be purged and sampled using a peristaltic pump outfitted with new polyethylene tubing and silicon tubing. In accordance with low-flow sampling protocols, indicator parameters, including pH, specific conductivity, turbidity, dissolved oxygen, temperature and oxidation-reduction potential, will be monitored and recorded throughout the purging process to determine when the ground water chemistry has stabilized. In addition, a purge rate ranging between 100 and 400 milliliters per minute will be maintained to prevent the effects of well water drawdown. Ground water samples will be collected once the indicator parameters stabilize to within the prescribed tolerances for three consecutive readings recorded at three to five minute intervals. All samples will be collected directly from the pump output. Bladder pumps will be decontaminated between wells.

4.0 REPORTING

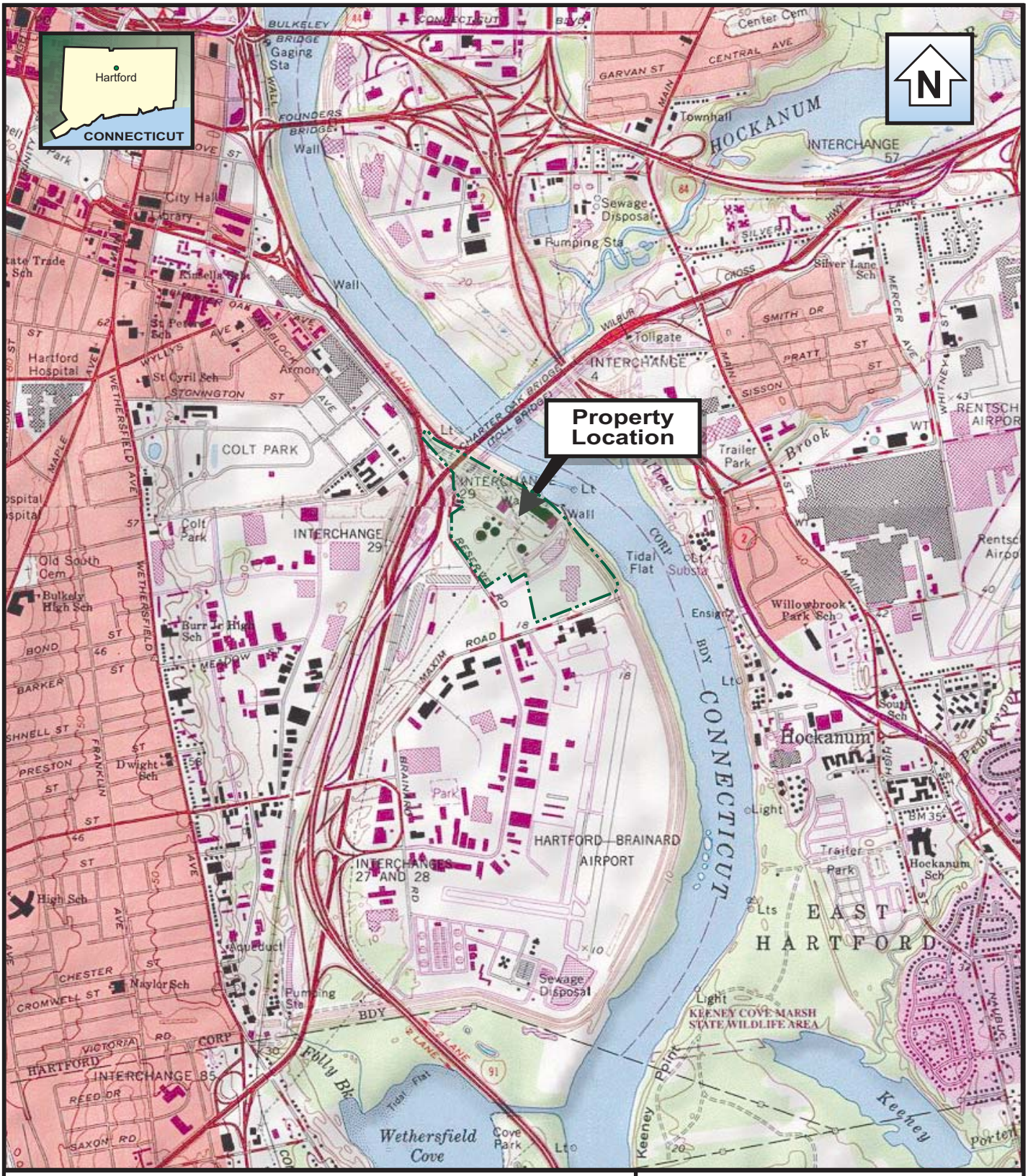
As provided for in each of the EC applications and in accordance with the CTDEEP's Engineered Control Guidance Document, an annual report will be prepared and will be accompanied by a cover sheet with an LEP certification identifying whether conditions have changed in relation to the ECs. According to the EC guidance, this annual report will include:

1. The name and contact information of the party responsible for assuring the integrity of the EC and whether that responsibility has been transferred to another party since the previous status report;
2. A statement ensuring that the approved financial assurance for the EC in the appropriate amount and form has been implemented;
3. Documentation that any required inspection of the EC has been performed;
4. Documentation of any maintenance or repair measures needed since the previous status report;
5. Documentation of any failure of the EC which has occurred (exposed waste, breached cap, etc.);
6. Documentation of the status of the implementation and successful completion of such maintenance or repair measures;
7. Documentation of notification to the CTDEEP as soon as knowledge of the failure occurred;
8. Documentation that ground water monitoring (as required) has been performed and the consistency of those results with those predicted by the conceptual site model; and
9. Any changes to the land use at the site which may influence the effectiveness of the EC.

Note that although the guidance highlights specifically that which is applicable to the inspections of the ECs, for the purposes of this monitoring plan, it also applies the inspections of and reporting related to the permanent structures at the Site as designated in Table 2.

Note that the reports related to the monitoring and inspections and will be maintained in the project file. Ground water results will be evaluated in accordance with the procedures outlined in Table 6. Reports will only be submitted to the CTDEEP should conditions change drastically, if substantial corrective measures are taken or if ground water sampling indicates that an EC is not functioning as designed.

FIGURES



0 2000
SCALE FEET

0 1
SCALE MILE

1:24000

BASE CREATED WITH TOPO™ © 1996 WILDFLOWERS PRODUCTIONS,
www.topo.com 7.5' USGS TOPOGRAPHIC

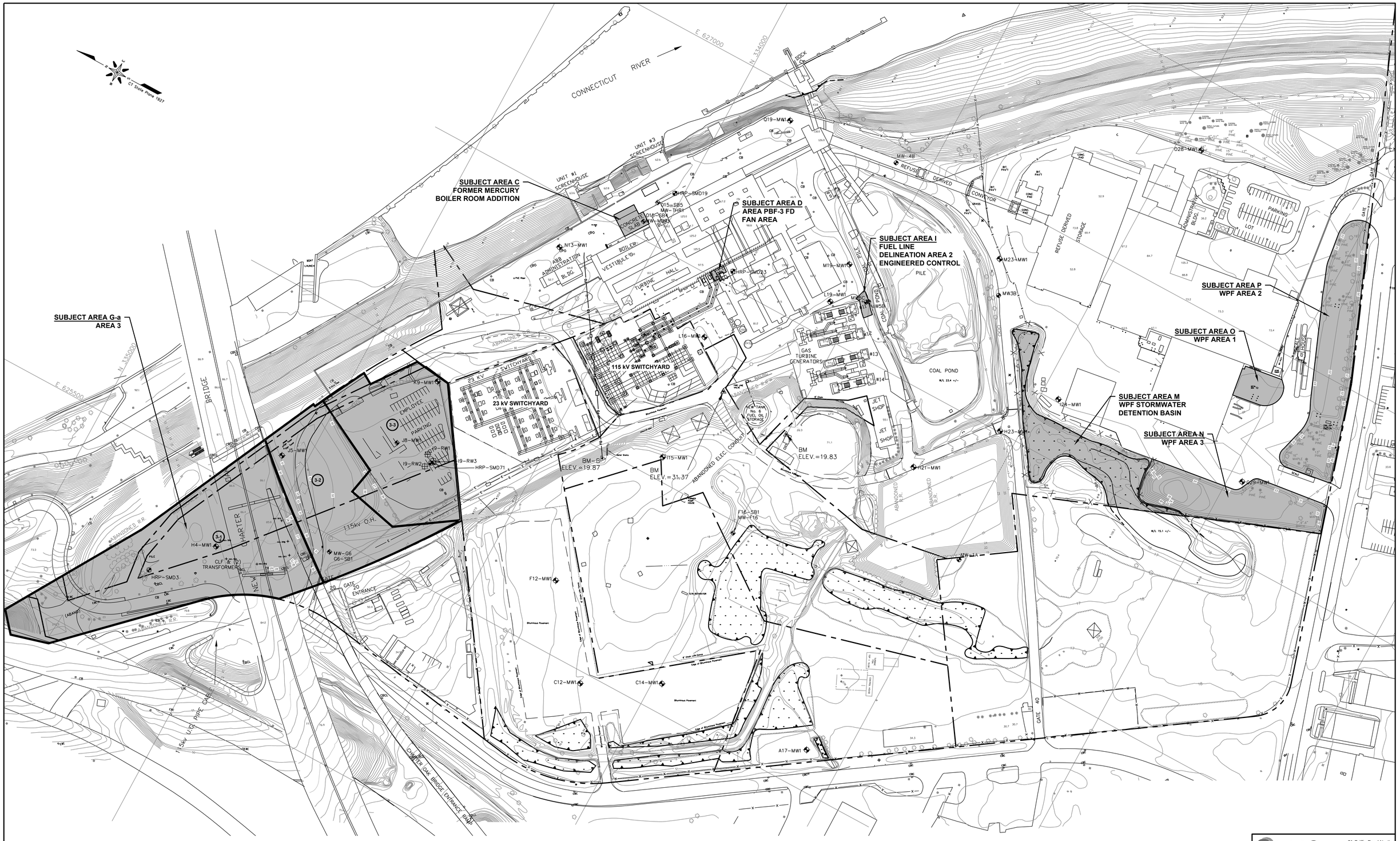
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RESERVE AND MAXIM ROAD
HARTFORD, CONNECTICUT

FIGURE 1
PROPERTY LOCATION MAP

Date: 01/2013 | **Project No.** 105333

graphics/crra/105333 SWPC 2-2013 topo



0 100' 200'
GRAPHIC SCALE

J:\CAD\105333\009130\Inspections & Long Term GW Monitoring\
Figure 2 Updated 03-10-16.dwg Layout:Figure 2 January 17, 2018-7:49AM KHallenbeck

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CONNECTICUT RESOURCES RECOVERY AUTHORITY
MAXIM AND RESERVE ROAD
HARTFORD, CONNECTICUT

FIGURE 2
ENGINEERED CONTROL AREAS AND MONITORING WELL LOCATIONS

Date: 01/17/18 | Project No. 105333-009130-000000

FIGURE 3
PERMANENT STRUCTURE REFERENCE MAP



GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

MCA
MARTINEZ COUCH & ASSOCIATES
ENGINEERING • LAND SURVEYING • ENVIRONMENTAL
CONSTRUCTION INSPECTION • GIS • WASTEWATER

1084 Cromwell Avenue, Suite A-2
Rocky Hill, CT 06067
Telephone: (860) 436-4364
Fax: (860) 436-4626
www.martinezcouch.com

300 MAXIM ROAD
100 RESERVE ROAD
HARTFORD, CONNECTICUT

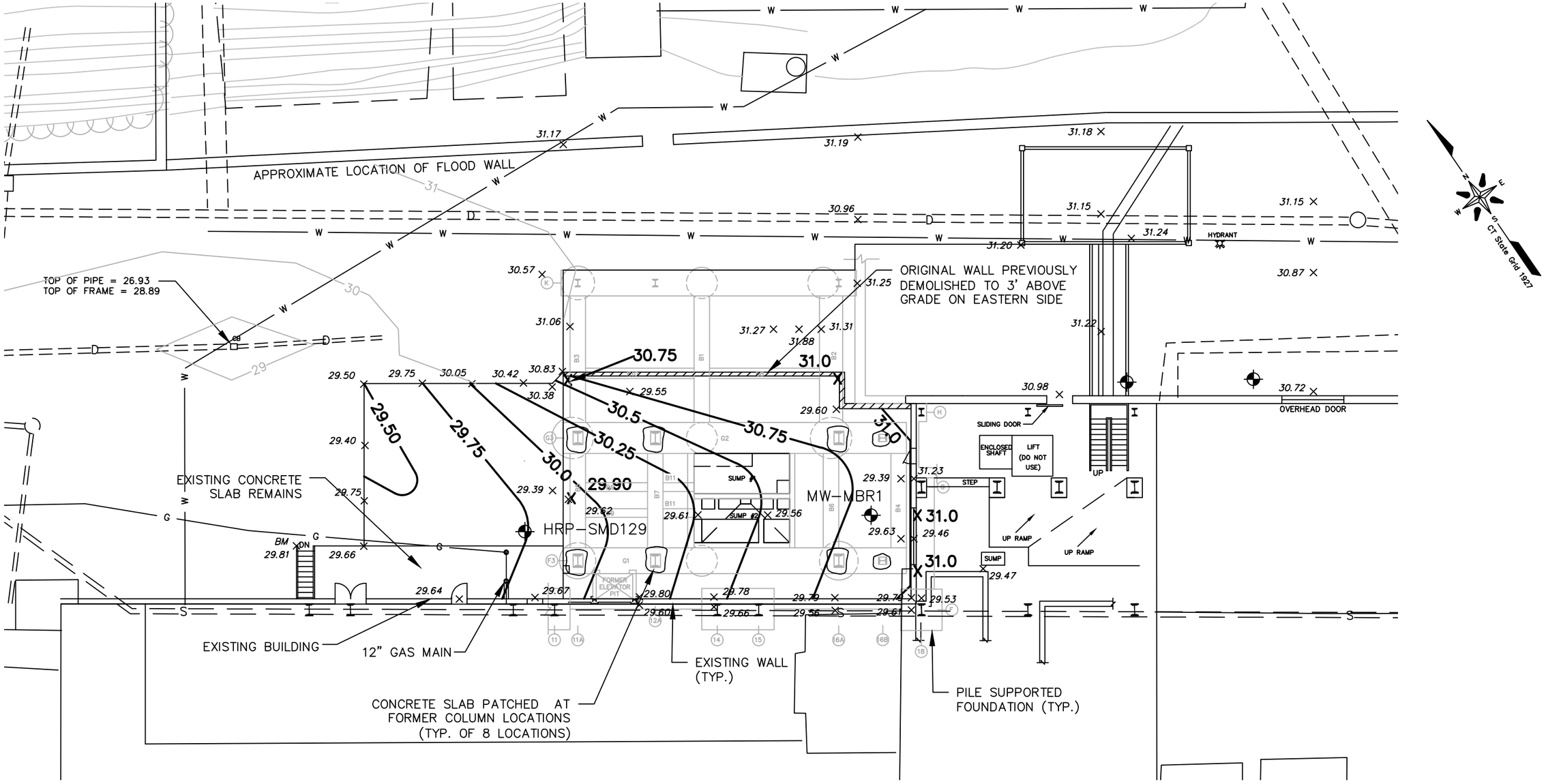
PROPERTY OF MATERIALS INNOVATION AND RECYCLING AUTHORITY

NO.	DATE	REVISIONS	BY	CHK	APPV
5	12-10-15	ATTORNEY COMMENTS	ASF	JB	
4	7-20-15	ATTORNEY COMMENTS	ASF	AM	
3	11-11-13	ATTORNEY COMMENTS	ASF	AM	
2	10-28-13	ATTORNEY COMMENTS	ASF	AM	
1					

DRAWN BY: ASF | CHECKED BY: ARM | SCALE: AS NOTED | DATE: 3-8-13

EXHIBIT C: DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION AND GRANT OF EASEMENT, PROPERTY OF MATERIALS INNOVATION AND RECYCLING AUTHORITY
300 MAXIM ROAD AND 100 RESERVE ROAD
HARTFORD, CONNECTICUT

JOB NO.	DRAWING NUMBER	SHEET
32-154	32-154ELUR.DWG	4 OF 6



LEGEND

G1 — GRADE BEAM AND CAISSON BENEATH SLAB

30.0 — GRADE CONTOUR

0 20' 40'

GRAPHIC SCALE

TRC

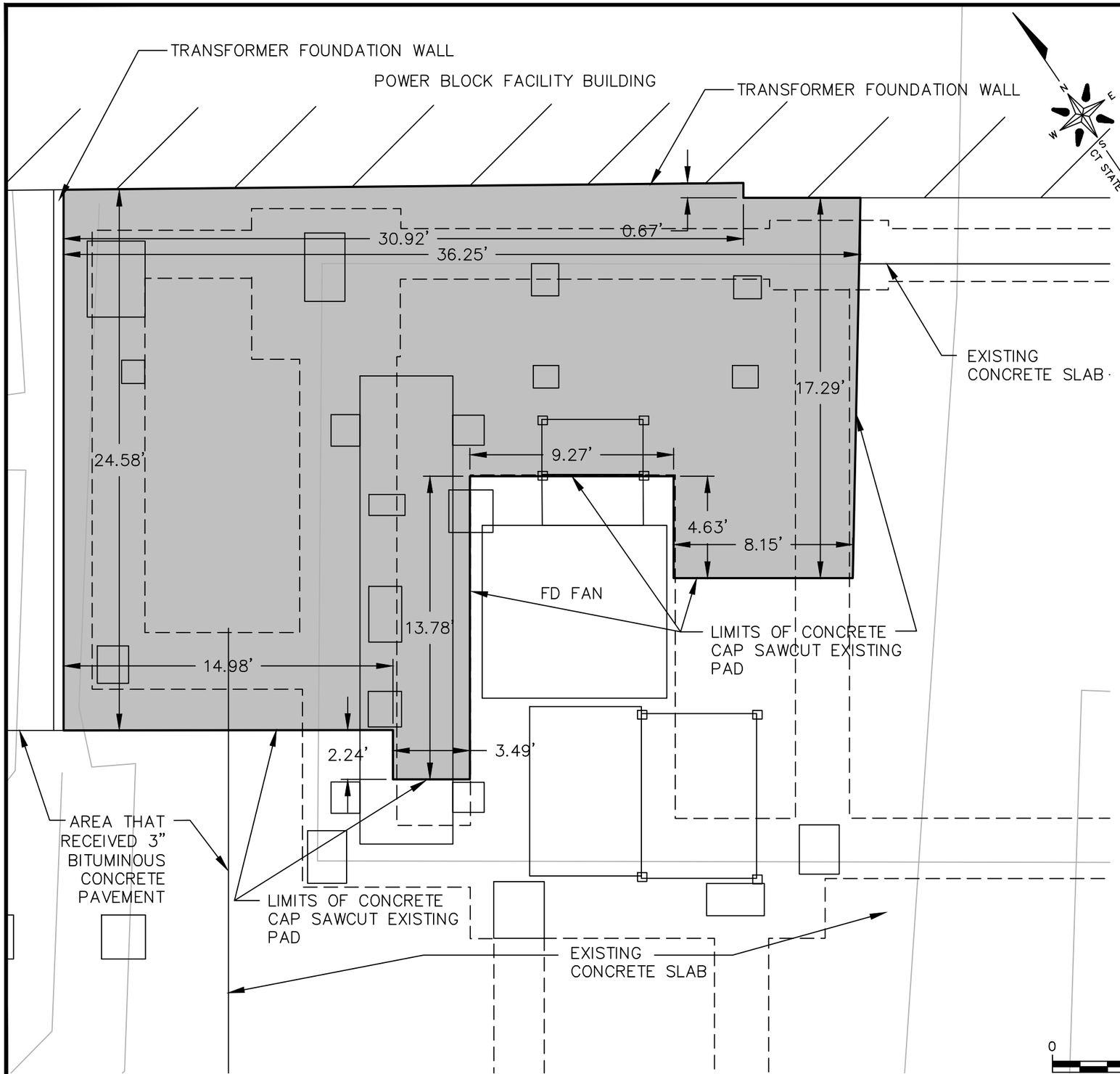
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CONNECTICUT RESOURCES RECOVERY AUTHORITY
MAXIM & RESERVE ROADS
HARTFORD, CONNECTICUT

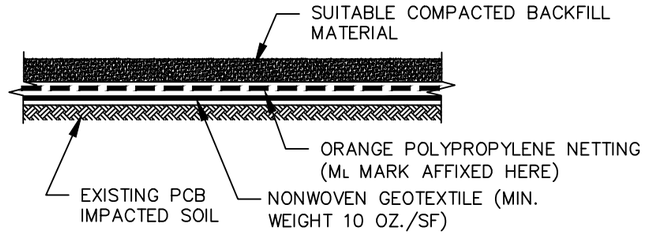
FIGURE 4
FORMER MERCURY BOILER ROOM AS-BUILT PLAN

Date: 01/17/18 | **Project No. 105333-009130-000000**

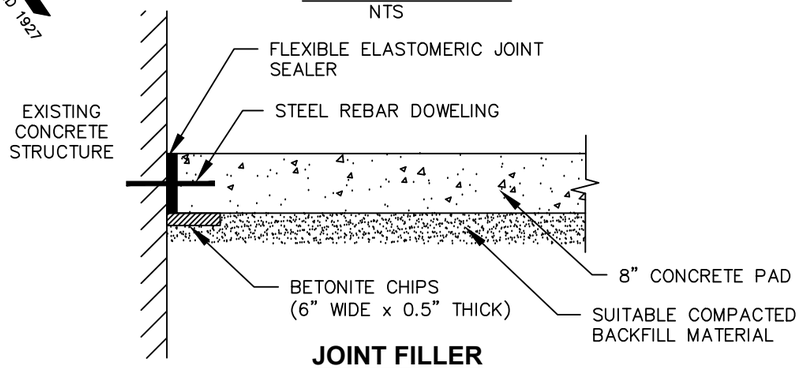
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Figure 4.dwg Layout:Figure 4 January 17, 2018—8:03AM KHollenbeck



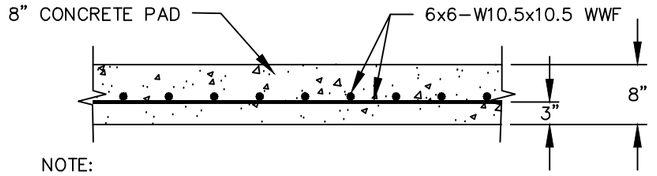
J:\CAD\105333\009130\Inspections & Long Term GW Monitoring\
Figure 5.dwg Layout:Figure 5 January 17, 2018–8:23AM KHollenbeck



BARRIER LAYER
NTS



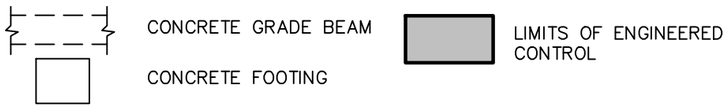
JOINT FILLER
NTS



NOTE:
THE CONCRETE IS AT A MIN. 4,000 PSI CONCRETE WITH WATERPROOFING ADMIXTURE AND STEEL WELDED WIRE MESH 6x6–W10.5x10.5 WWF, PLACED 3" FROM BOTTOM OF PAD. AFTER POURING THE CONCRETE PAD, WATERPROOF COATING WAS APPLIED AND SIGNS WITH THE ML MARK WERE PLACED AT THE SURFACE OF THE PAD TO INDICATE THE PRESENCE OF PCB–CONTAINING SOILS BENEATH.

8" CONCRETE PAD
NTS

LEGEND



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CONNECTICUT RESOURCES RECOVERY AUTHORITY
MAXIM AND RESERVE ROAD
HARTFORD, CONNECTICUT

FIGURE 5
AREA PBF-3
EXCAVATION AREA 3B (FD FAN AREA)
CONCRETE CAP ENGINEERED CONTROL

Date: 01/17/18 | **Project No. 105333-001930-000000**

CT State Grid 1927

CHARTER OAK LANDING ACCESS ROAD

SURFACE FLOW

FILL & GEOTEXTILE AREA = 86,102 S.F.

EXCAVATED 2' DEPTH, INSTALLED ORANGE GEOTEXTILE AND PLACE EXCAVATED SOIL BACK OVER GEOTEXTILE. AREA = 14,344 S.F.

HDPE PAVER AREA = 18,328 S.F.

HIGH VOLTAGE ELECTRICAL WIRE TOWER

AREA 3–1A EXCAVATION AREA (PER 2009 RAP)

AREA 3–1A (AREA OF ADDITIONAL EXCAVATION)

AREA 1–2 SOILS PLACED BENEATH BARRIER LAYER

AREA 3–1B EXCAVATION AREA

WPF BASIN FENCE LINE SOILS PLACED BENEATH BARRIER LAYER

GATE 20 ENTRANCE

0 60' 120'

GRAPHIC SCALE

LEGEND

- MW–1 MONITORING WELL
- HRP BORING LOCATION
- HRP BORING LOCATION
- ME BORING
- TRC BORING LOCATION
- TEST PIT
- HAND AUGUR
- CHAIN LINK FENCE
- RIPRAP SWALE

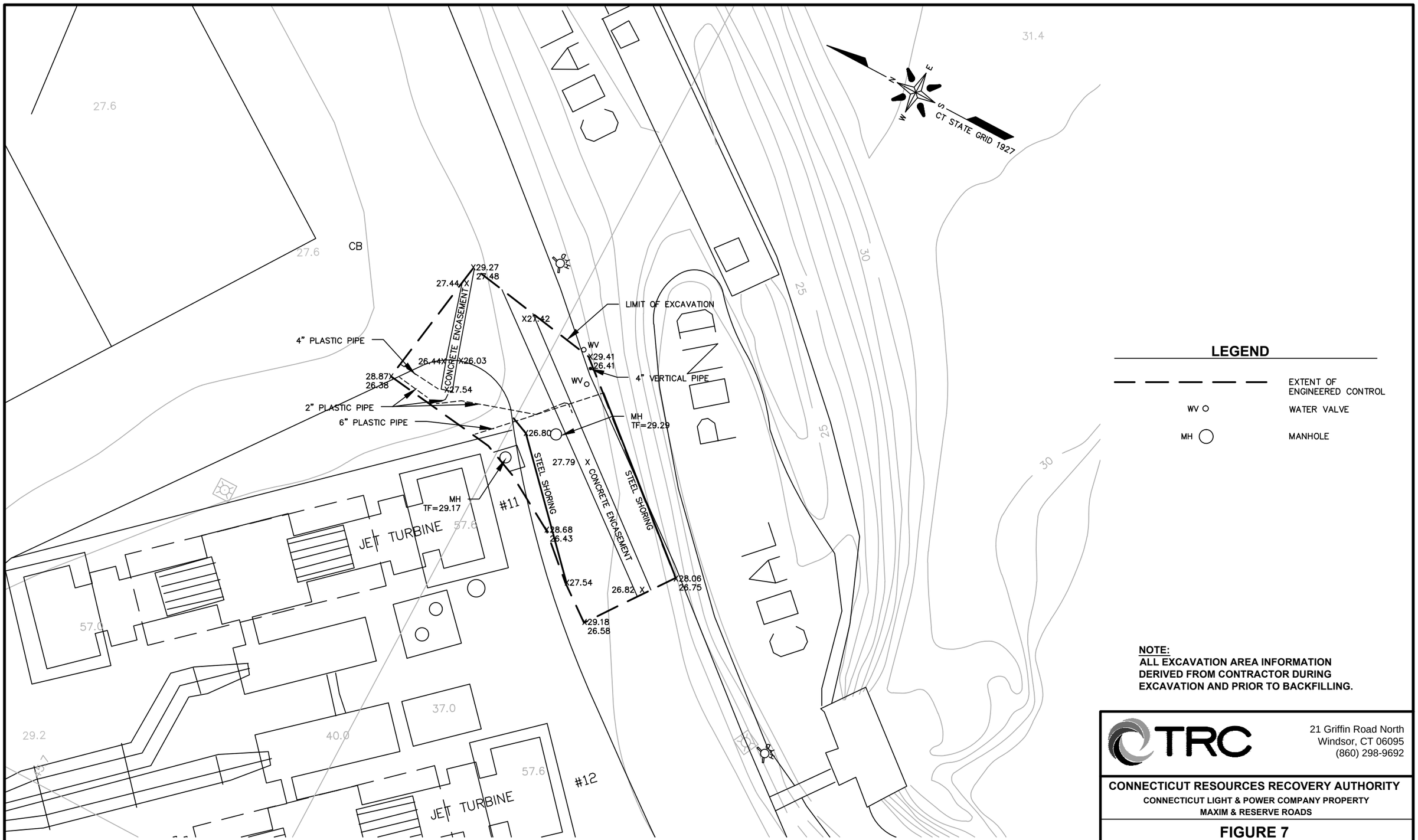
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CONNECTICUT RESOURCES RECOVERY AUTHORITY
MAXIM & RESERVE ROADS

FIGURE 6
AREA 3-1
ENGINEERED CONTROL AS-BUILT

Date: 01/17/18 | Project No. 105333-009130-000000

J:\CAD\105333\009130\Inspections & Long Term GW Monitoring\
Figure 6.dwg Layout:Figure 6 January 17, 2018–8:32AM KHollenbeck



LEGEND

- EXTENT OF ENGINEERED CONTROL
- WV — WATER VALVE
- MH — MANHOLE

NOTE:
ALL EXCAVATION AREA INFORMATION DERIVED FROM CONTRACTOR DURING EXCAVATION AND PRIOR TO BACKFILLING.

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CONNECTICUT RESOURCES RECOVERY AUTHORITY
CONNECTICUT LIGHT & POWER COMPANY PROPERTY
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FIGURE 7
FUEL LINE DELINEATION AREA 2
EXCAVATION AREA AS-BUILT

Date: 01/17/18 | **Project No. 105333-009130-000000**

J:\CAD\105333\009130\Inspections & Long Term GW Monitoring\
Figure 7.dwg Layout:Figure 7 January 17, 2018–8:46AM KHollenbeck

CONCRETE REVETMENT MATTING PROTECTED SLOPE

RIP RAP STORM OUTFALL SPLASH PAD

VEGETATED SLOPE TRANSITION

BIT. CONCRETE

BIT. CONCRETE

CONCRETE PAD

BIT. CONCRETE

MANEUVER HALL

LIMITS OF RIPRAP CHANNEL

VEGETATED SLOPE TRANSITION

I24–MW1

NON–DISTURBED RIPRAP SLOPE TRANSITION

DISTURBED RIPRAP SLOPE TRANSITION

NON–DISTURBED RIPRAP SLOPE TRANSITION

H23–MW1

RIP RAP STORM OUTFALL SPLASH PAD

RIPRAP COVERED SLOPE

VEGETATED SLOPE TRANSITION

GATE 40 ACCESS ROAD

RIP RAP STORM OUTFALL SPLASH PAD

DISTURBED RIPRAP SLOPE TRANSITION

DENSE BRUSH & VEGETATION

VEGETATED SLOPE TRANSITION

VEGETATED SLOPE TRANSITION

RIPRAP LINED SLOPE

BASIN OUTFALL PIPE

NORTHEAST UTILITY PROPERTY

CT STATE GRID 1927

SURVEY NOTES:

TOPOGRAPHIC SURVEY OF THE STORM WATER DETENTION BASIN WAS PERFORMED BY MARTINEZ COUCH & ASSOCIATES, LLC. IN APRIL 2012.

ELEVATIONS VERIFIED BY MCA DURING CONSTRUCTION IN MARCH/APRIL 2013.

VERTICAL DATUM IS NGVD 1929

HORIZONTAL DATUM IS CONNECTICT STATE PLANE 1927.

0 50’ 100’

GRAPHIC SCALE

J:\CAD\105333\009130\Inspections & Long Term GW Monitoring\
Figure 8.dwg Layout:Figure 8 January 17, 2018–9:02AM KHollenbeck

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CONNECTICUT RESOURCES RECOVERY AUTHORITY

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MAXIM & RESERVE ROADS

FIGURE 8
WPF STORM WATER DETENTION BASIN AS-BUILT PLAN

Date: 01/17/18 | Project No. 105333-009130-000000

TABLES

Table 1
Engineered Control ELUR Subject Area/AOC Summary
MIRA South Meadows Station
Hartford, Connecticut

ELUR Subject Area Identification	Current AOC Designation	Type of ELUR	Contaminant	Engineered Control Type	General Long Term Inspection and Monitoring Requirements as Outlined in EC Application
C	Former Mercury Boiler Room Addition	Inaccessible and environmentally isolated soil	Mercury and arsenic	Concrete slab and pavement.	Semi-annual inspections of bituminous concrete and concrete to ensure no cracks are forming that would allow water to flow through the EC . Two years of quarterly ground water monitoring (already completed) followed by annual ground water monitoring for mercury at two wells (MW-MBR1 and HRP-SMD19).
D	Area PBF-3/FD Fan Area	Inaccessible and environmentally isolated soil	PCBs and arsenic	Orange polypropylene netting, backfill and 8 inch reinforced concrete pad bearing the m_L mark.	Semi-annual inspections for 28 years of concrete to ensure no cracks are forming in the EC . Two years of quarterly ground water monitoring (already completed) followed by annual ground water monitoring for PCBs at one well (HRP-SMD23) for 28 years.
G	Area 3-1	Inaccessible soil	Arsenic, lead, ETPH, PAHs and ACM	Orange geotextile barrier layer and HDPE pavers.	Semi-annual inspections to ensure no surface erosion that could affect the EC. Long term annual ground water monitoring for ETPH and PAHs at two wells (H4-MW1 and J5-MW1).
I	Fuel Line Delineation Area 2	Environmentally isolated soil	ETPH	Geomembrane, backfill and pavement.	Semi-annual inspections to ensure there are no signs of subsidence that would indicate disturbance of the geomembrane liner. Long term annual ground water monitoring for ETPH, PAHs and VOCs at two wells (L19-MW1 and M19-MW1).
M	WPF Storm water Detention Basin	Inaccessible soil	Arsenic and beryllium	Orange geotextile, gravel, rip-rap, vegetation and continuous chain link fence.	Semi-annual inspections to ensure crushed stone layer and filter fabric are not disturbed. Side slopes and splash pads inspected for erosion damage. Perimeter fence inspected for damage. Annual ground water monitoring for arsenic at three wells (I24-MW1, H23-MW1 and M23-MW1).
N	WPF Area 3	Inaccessible soil	Arsenic and ACM	HDPE pavers.	Semi-annual inspections to ensure surface of area is in good condition and no evidence of surface erosion that might effect the EC. With completion of compliance ground water monitoring, EC application does not indicate a requirement for continued long term ground water monitoring.
O	WPF Area 1	Inaccessible soil	Arsenic	HDPE pavers.	Semi-annual inspections to ensure surface of area is in good condition and no evidence of surface erosion that might effect EC. With completion of compliance ground water monitoring, EC application does not indicate a requirement for continued long term ground water monitoring.
P	WPF Area 2	Inaccessible soil	Arsenic	HDPE pavers.	Semi-annual inspections to ensure surface of area is in good condition and no evidence of surface erosion that might effect EC. With completion of compliance ground water monitoring, EC application does not indicate a requirement for continued long term ground water monitoring.

Table 3
EC Inspection and Monitoring Program Summary
MIRA South Meadows Station
Hartford, Connecticut

	Inspection	**LTGWM**	**Reporting**
Frequency	Semiannual	Annual	Annual
ELUR Subject Area		No. of Wells ↓	
C (Former Mercury Boiler Room Addition)	X	2	X
D (Area PBF-3/FD Fan Area)	X	1	X
G-a (Area 3-1)	X	2	X
I (Fuel Line Delineation Area 2)	X	2	X
M (WPF Stormwater Detention Basin)	X	3	X
N (WPF Area 3)	X	0	X
O (WPF Area 1)	X	0	X
P (WPF Area 2)	X	0	X

Notes

LTGWM: Long Term Ground Water Monitoring

Reports should be reviewed by TRC LEP with submittal to CTDEEP only if corrective measures are taken.

Table 4
Long Term Ground Water Sampling Schedule
MIRA South Meadows Station
Hartford, Connecticut

	Well ID	Well Specifications			Intake Depth (ft bgs)	Sample Analyses	Sample Schedule	
		Well Dia. (in)	Total Depth (ft)	Screen Interval (bgs)			Annually (October)	Quarterly (See Notes)
EC Area / AOC Designation								
Subject Area C / Former Mercury Boiler Room Addition	MW-MBR1	2	24	14-24	20	Hg	X	
	HRP-SMD19	1	28	3-28	25	Hg	X	
Subject Area D / Area PBF-3 / FD Fan Area	HRP-SMD23	1	26	6-26	23	PCBs	X	
Subject Area G / Area 3-1	H4-MW1	2	29	19-29	26	ETPH, PAHs	X	
	J5-MW1	2	30	20-30	26	ETPH, PAHs	X	
Subject Area I / Fuel Line Delineation Area 2	L19-MW1	2	25	15-25	23	Group 1	X	
	M19-MW1	2	25	15-25	23	Group 1	X	
Subject Area M / WPF Storm Water Detention Basin	I24-MW1	2	19	9-19	16	As	X	
	H23-MW1	2	15	5-15	10	As	X	
	M23-MW1	2	18	8-18	15	As	X	
Miscellaneous Areas	HRP-SMD71	1	27.5	2.5-27.5	NA	LNAPL		X
	THR-MW1	2	30	20-30	NA	LNAPL		X
	C12-MW1	2	14	4-14	NA	LNAPL		X

Notes:

ft bgs — feet below ground surface

Sample Analysis

Group 1 — Volatile Organic Compounds via EPA Method 8260B , Polynuclear Aromatic Hydrocarbons via EPA Method 8270 and ETPH by CTDEEP-Approved Method. Gauge wells for LNAPL.

Hg — Total Mercury by EPA Method 7471

As — Total Arsenic by EPA Method 6010

PCBs — Polychlorinated Biphenyls by EPA Method 8082

ETPH and PAHs — See above for methods

LNAPL — Light non-aqueous phase liquid gauging only to be performed quarterly (April, July, October and January)

Table 5
Existing Ground Water Monitoring Well Specifications
South Meadows
Hartford, Connecticut

Well ID	PVC Casing Elevation	Northing	Easting	General Location	Completion date	Screened Interval (fbg)	Construction Details
HRP-SMD3	30.2	334712.6	625215.1	Grassy area nw of COB	3/1/1999	3-28	1" Sch 40, 0.01"slot, FM
H4-MW1	29.18	334595.9	625343.5	Area 3, north of COB	11/9/2012	19-29	2" Sch 40 0.01" slot, FM
G6-SB1 (MW-G6)	29.91	334345.8	625463.8	Area 3	11/5/2001	20-30	2" Sch 40, 0.01" slot, FM
J5-MW1	31.58	334559.8	625615.6	Area 3, north of access road	11/9/2012	20-30	2" Sch 40 0.01" slot, FM
I9-RW1	26.07	334248.1	625787.4	contractor parking lot	3/22/2006	10-20	4" Sch 40, 0.01" slot, FM
I9-RW2	25.72	334240.5	625758.4	contractor parking lot	3/22/2006	10-20	4" Sch 40, 0.01" slot, FM
I9-RW3	26.29	334228.3	625779.8	contractor parking lot	3/22/2006	10-20	4" Sch 40, 0.01" slot, FM
HRP-SMD71	25.97	334231.1	625772.6	contractor parking lot	3/2/1999	2.5-27.5	1" Sch 40, 0.01"slot, FM
J8-MW1	26.54	334327.2	625776.9	contractor parking lot	10/3/2012	8-23	2" Sch 40, 0.01" slot, FM
K9-MW1	28.74	334311.6	625955.7	contractor parking lot	11/12/2012	18-28	2" Sch 40 0.01" slot, FM
N13-MW1	29.40	334205.7	626386.2	east of admin building	11/12/2012	18-28	2" Sch 40 0.01" slot, FM
O15-SB4(MBR-MW1)	30.23	334055.1	626539	former MBR	3/24/2004	14-24	2" Sch 40 0.01" slot, FM
O15-SB5(THR-MW1)	30.48	334046.5	626596.5	former MBR	3/24/2004	20-30	2" Sch 40 0.01" slot, FM
HRP-SMD19	30.45	334020.4	626636.2	Adjacent to track hopper room	3/1/1999	3-28	1" Sch 40, 0.01"slot, FM
Q19-MW1	32.38	333857.3	626926.2	near RDF conveyor	11/9/2012	16.5-26.5	2" Sch 40 0.01" slot, FM
MW-4B	27.31	333580.5	626958.8	Coal Pond	6/12/1984	16-46	2" Sch 40, 0.02" slot, FM
M23-MW1	20.94	333246.3	626872.8	Coal pond	11/12/2012	8-18	2" Sch 40 0.01" slot, FM
MW-3B	20.83	333206	626793.2	Coal pond	6/8/1984	17-37	2" Sch 40, 0.02" slot, FM
H23-MW1	18.56	333045.2	626503.7	east of area 1-6	11/6/2012	5-15	2" Sch 40 0.01" slot, FM
H21-MW1	22.76	333189.2	626325.5	east of area 1-6	11/6/2012	10-20	2" Sch 40 0.01" slot, FM
MW-5B	28.96	333477.7	626628.4	Coal Pond	6/11/1984	16-46	2" Sch 40, 0.02" slot, FM
MW-5C	28.98	333482.5	626625	Coal Pond	UNKNOWN	unknown	2" Sch 40. FM
L19-MW1	27.96	333560.4	626583.8	jets	11/15/2012	15-25	2" Sch 40 0.01" slot, FM
M19-MW1	29.10	333562.8	626686.2	east of jets	11/14/2012	15-25	2" Sch 40 0.01" slot, FM
HRP-SMD23	27.81	333805.2	626536.2	Center of PBF	3/1/1999	6-26	1" Sch 40, 0.01"slot, FM
MW-1A	18.53	332983.7	626179.2	Coal Pond	6/8/1984	10-30	2" Sch 40, 0.02" slot, SU
A17-MW1	20.53	333090.1	625593.4	area 1-3	11/7/2012	5-15	2" Sch 40 0.01" slot, SU
C14-MW1	16.06	333478	625567.3	west of fuel farm	11/7/2012	4-14	2" Sch 40 0.01" slot, FM
C12-MW1	16.25	333654	625472.9	west of fuel farm	11/7/2012	4-14	2" Sch 40 0.01" slot, FM
F12-MW1	16.88	333826.2	625665.5	west of fuel farm	11/7/2012	4-14	2" Sch 40 0.01" slot, FM
L16-MW1	27.88	333789.5	626361.5	Former switchyard	11/14/2012	17-27	2" Sch 40 0.01" slot, FM
I15-MW1	19.28	333739.7	626055.2	Fuel Farm	11/5/2012	3-13	2" Sch 40 0.01" slot, SU
F16-SB1 (MW-F16)	17.7	333500.7	625975.9	Fuel Farm	11/1/2001	3-13	2" Sch 40, 0.01" slot, FM
O28-MW1	20.15	332939.2	627340.6	east of WPF	11/13/2012	9-19	2" Sch 40 0.01" slot, FM
I24-MW1	21.28	332956.8	626639.4	West of WPF	11/13/2012	9-19	2" Sch 40 0.01" slot, FM
G29-MW1	20.73	332465.9	626676.1	West of WPF	11/13/2012	9-19	2" Sch 40 0.01" slot, FM

Table 6
Ground Water Data Evaluation
MIRA South Meadows Station
Hartford, Connecticut

EC Area / AOC Designation	Well ID	Sample Analyses	Constituent Compliance Level	Data Evaluation
Subject Area C / Former Mercury Boiler Room Addition	MW-MBR1	Hg	0.4 µg/l*	Evaluate concentration relative to RSR criteria and temporal trends.
	HRP-SMD19	Hg	0.4 µg/l*	Evaluate concentration relative to RSR criteria and temporal trends.
Subject Area D / Area PBF-3 / FD Fan Area	HRP-SMD23	PCBs	0.5 µg/l*	Evaluate concentration relative to RSR criteria and temporal trends.
Subject Area G / Area 3-1	H4-MW1	ETPH, PAHs	ETPH - No established criteria PAHs - Varies by constituent. See CT RSRs for all except phenanthrene, for which an alternative criteria was approved (7.7µg/l**)	While there is no criteria for ETPH, data will be used to monitor petroleum concentrations with respect to historic trends. PAH concentrations will be evaluated relative to RSR (or approved alternative***) criteria.
	J5-MW1	ETPH, PAHs	see above	Same as above, ETPH / PAH entry
Subject Area I / Fuel Line Delineation Area 2	L19-MW1	Group 1	ETPH and PAHs, see above. VOCs vary by constituent. See CT RSRs.	While there is no criteria for ETPH, data will be used to monitor petroleum concentrations with respect to historic trends. PAH and VOC concentrations will be evaluated relative to RSR (or approved alternative***) criteria.
	M19-MW1	Group 1	see above	Same as above, Group 1 entry
Subject Area M / WPF Storm Water Detention Basin	I24-MW1	As	400 µg/l**	Evaluate criteria relative to approved alternative SWPC*** and temporal trends.
	H23-MW1	As	400 µg/l**	see above
	M23-MW1	As	400 µg/l**	see above
Miscellaneous Areas	HRP-SMD71	LNAPL	presence/absence	If present, install absorbent sock and re-measure. Remove sock if no measurable LNAPL.
	THR-MW1	LNAPL	presence/absence	see above
	C12-MW1	LNAPL	presence absence	see above

Notes:

* Surface Water Protection Criteria (SWPC) as presented in the CT RSRs.

** Value based on approved alternative SWPC for the site.

*** Historically, compliance with the approved alternative SWPC has been achieved through the use of a 95 % UCL calculation at several wells across the site.

Sample Analysis

Group 1 Volatile Organic Compounds via EPA Method 8260B , Polynuclear Aromatic Hydrocarbons via EPA Method 8270 and ETPH by CTDEEP-Approved Method. Gauge wells for LNAPL.

Hg Total Mercury by EPA Method 7471

As Total Arsenic by EPA Method 6010

PCBs Polychlorinated Biphenyls by EPA Method 8082

ETPH and PAHs See above for methods

LNAPL Light non-aqueous phase liquid gauging only to be performed quarterly (April, July, October and January)

APPENDIX A

PHOTOGRAPHS OF EC AREAS



PHOTO 1 Subject Area C - Former Mercury Boiler Room Addition EC Area - Facing South.



PHOTO 2 Just North of Subject Area D - FD Fan EC Area.



PHOTO 3 Subject Area G - Area 3-1 EC from the South.



PHOTO 4 Subject Area G - Area 3-1 from the North.



PHOTO 5 Subject Area I - Fuel Line Delineation Area 2 EC Area - Facing Southwest.



PHOTO 6 Subject Area M - WPF Stormwater Detention Basin EC Overview from the East.



PHOTO 7 Subject Area M - WPF Stormwater Detention Basin Northern Portion of the Basin Slopes and Rip-Rap-Lined Swale Facing East.



PHOTO 8 Subject Area N - WPF Area 3 Facing South.



PHOTO 9 Subject Area O - WPF Area 1 Facing Southeast.



PHOTO 10 Subject Area P - WPF 2 Area from the East.

APPENDIX B

PERMANENT STRUCTURE LETTER
(TRC TO CTDEEP DATED NOVEMBER 8, 2017)

21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.6399 FAX

www.TRCsolutions.com

November 8, 2017

Commissioner of the CTDEEP
c/o Peter Hill, ELUR Coordinator
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106

RE: Designation of Various Features at the MIRA
South Meadows Facility as Permanent Structures
300 Maxim Road &100 Reserve Road, Hartford, CT
REM ID Numbers: 4670 & 9427

VIA E-MAIL

Dear Commissioner:

This letter and its associated attachments hereby serves as a notification of the intent to designate specific features at the MIRA South Meadows Facility located at the above-referenced addresses as permanent structures to render underlying soils inaccessible. As indicated in the Environmental Land Use (ELUR) Decision Document prepared for this site, the polluted soil does not pose a risk to human health, provided the soil is not exposed, excavated or disturbed such that people may come into contact with it, and the permanent structures, which are rendering such polluted soil inaccessible, are not disturbed in any manner. As required by Section 22a-133k-2(b)(3) of the Regulations of Connecticut State Agencies, the ELUR prohibits inaccessible soil from being exposed as a result of excavation or other intrusive activities. Should the permanent structures be removed in the future such that the underlying soils are no longer rendered inaccessible, the applicable regulatory processes are required to be followed to ensure the protection of human health and the environment.

Note that there were two previous letters, both dated December 10, 2015 and addressed to the CTDEEP Commissioner from TRC, that served as notifications to designate particular features as permanent structures. Specifically, the letters notified the Commissioner that the Coal Pond/Coal Pond Liner located within ELUR Subject Area J and transformer and electrical equipment foundations located within ELUR Subject Areas E, F-1 and F-2 would be designated as permanent structures that render the underlying soils inaccessible. For the purposes of submittal of a

comprehensive notification, the two letters are incorporated as Attachment A and the items designated as permanent structures are reiterated herein.

Based on observations made during a July 2017 site tour and discussions among MIRA, TRC and CTDEEP representatives, it was determined that there are additional features present on-site that are to be considered permanent structures that serve to render underlying soils inaccessible. The following table serves to identify each feature, its general physical location at the MIRA South Meadows facility site, the ELUR Subject Area in which it is located and a reference to both a site map in Attachment B on which the feature is located and the photo or photo series in Attachment C in which it is depicted.

Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Map Reference	Photo Reference
Power Block Facility (PBF): 100 Reserve Road				
Utility Tower Foundation	Northwestern Corner of Site	Subject Areas A-1 and G-a	1	1 & 2
Billboard Sign Foundation	South of Charter Oak Bridge / Northeastern Part of Site	Subject Areas A-1 and G-b	2	3 & 4
Large Electrical Pole Foundations	South of Charter Oak Bridge in Grassy Area	Subject Areas A-1 and G-b	3	5 – 7
Utility Tower Foundation	Eastern Side of Site Near Concrete Dike Wall	Subject Area A-1	4	8 & 9
Electrical Equipment Foundations	23 kV Switchyard, 115 kV Switchyard and the Former Switchyard (All in Central Portion of PBF)	Subject Areas A-1, A-2, E, F-1 and F-2	5	10 - 14
Foundation of Backflow Preventer Shed	On Roadway Adjacent to 115 kV Switchyard	Subject Area A-1	6	15
Utility Tower Foundations	Far Eastern Side of Former Fuel Farm	Subject Area H-1	7	16 & 17
Large Electrical Pole Foundation	In Asphalt Area North of Jet Yard	Subject Area A-1	8	18
Fuel Oil Aboveground Storage Tank (AST)	Former Fuel Farm	Subject Area H-1	9	19
Foundation of Pump House Near Fuel AST	Former Fuel Farm	Subject Area H-1	10	20 & 21

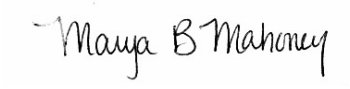
Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Map Reference	Photo Reference
Concrete End-wall	Far Southeastern End of Former Fuel Farm	Subject Area A-1	11	22
Concrete Pads and Foundations and Jet Turbine Foundations	Jet Yard	Subject Area A-1	12	23 - 28
Truck Scale	Gate 40 Roadway, South of Coal Pond/Coal Pile	Subject Area A-1	13	29
Coal Pond/Coal Pile Liner and Concrete "Pillows"	Southern Portion of PBF	Subject Areas A-1 and J	14	30 & 31
Two Concrete Structures Along the Northern Side of the Coal Pond	Coal Pond/Coal Pile in Southern Portion of PBF	Subject Areas A-1 and J	15	32 & 33
Concrete Portions of the Former Coal Conveyor System	Northeastern Portion of Coal Pond/Coal Pile	Subject Areas A-1 and J	16	34 - 37
Concrete Foundations Associated with the Conveyor System	Southeastern Portion of the PBF (East/Northeast of the Coal Pond/Coal Pile)	Subject Area A-1	17	38 - 42
Various Concrete Pads Adjacent to the Southeastern Corner of the Main PBF Building	Southeastern portion of PBF	Subject Area A-1	18	43 - 45
Three Aboveground, Vertical Storage Tanks	Off of the Southeastern Corner of the Main PBF Building	Subject Area A-1	19	46 & 47
Concrete Structure	Across the Roadway (East/Northeast) from the Various Concrete Pads	Subject Area A-1	20	48 & 49
Concrete Flood Dike Wall	Runs Along the Eastern/Northeastern Portion of the PBF (In the Area of the Main PBF Building)	Subject Area A-1	21	50 - 52
Silo Foundation	East/Northeast of the Main PBF Building	Subject Area A-1	22	53 & 54

Feature Designated As A Permanent Structure	General Location of Feature / Permanent Structure	ELUR Subject Area(s) In Which Feature/Permanent Structure Is Located	Map Reference	Photo Reference
Waste Processing Facility (WPF): 300 Maxim Road				
Concrete Foundations Underlying the Ventilation Equipment	North Side of WPF Building	Subject Area A-1	23	55 - 57
Concrete Foundations Underlying the Thermal Oxidizer Equipment	North Side of the WPF Building	Subject Area A-1	24	58 & 59
Concrete Truck Ramp	East Side of the WPF Building	Subject Area A-1	25	60 & 61
Concrete Foundations Underlying the Ventilation Equipment	East Side of WPF Building	Subject Area A-1	26	62
Truck Scales	South of WPF Building	Subject Area A-1	27	63 - 66
Truck Scale	Southwest of the WPF Building Near Maxim Road	Subject Area A-1	28	67 & 68

TRC developed an operations and maintenance plan for the MIRA South Meadows Facility in 2014 (with a revision in 2016) that addresses long-term inspections of the engineered controls present at the site, as well as long-term groundwater monitoring. TRC will complete a second revision to the plan to reflect the periodic inspection of the features identified herein as permanent structures. Completion of the inspection regimen will ensure that the structures remain in place and in a competent condition such that they fulfill the goal of rendering underlying soils inaccessible.

If you have any questions upon review of this document and its associated attachments, please contact me at (860)298-6226 or via email at mmahoney@trcsolutions.com.

Sincerely,
TRC ENVIRONMENTAL CORPORATION



Marya B. Mahoney, LEP
Senior Project Manager

Attachments

c: Christopher Shepard, P.E. – MIRA
Douglas Pelham – Cohn Birnbaum & Shea P.C.
Cynthia Retallick – TRC
Aaron Levy – Shipman & Goodwin LLP

ATTACHMENT A

DECEMBER 2015 PERMANENT STRUCTURE NOTIFICATIONS

21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.6399 FAX

www.TRCsolutions.com

December 10, 2015

Commissioner of the CTDEEP
c/o Michelle Bedson, ELUR Coordinator
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106

RE: Designation of Coal Pond/Coal Pond Liner at the MIRA South Meadows Facility as a Permanent Structure
300 Maxim Road &100 Reserve Road, Hartford, CT
REM ID Number: 4670

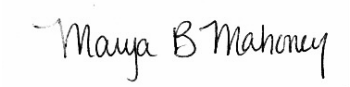
VIA E-MAIL

Dear Commissioner:

This letter hereby serves as a notification of the intent to designate the Coal Pond/Coal Pile liner present within ELUR Subject Area J at the above-referenced site as a permanent "structure". As depicted in the 1988 construction drawings for the Coal Pond/Coal Pile (see attached), which is located in the central portion of the South Meadows Facility property, the Coal Pond/Coal Pile liner is a 100-mil synthetic liner. Specifically, the liner is comprised of high-density polyethylene (HDPE) and it serves to render underlying polluted soils inaccessible. As indicated in the ELUR Decision Document prepared for this site, the polluted soil does not pose a risk to human health, provided the soil is not exposed, excavated or disturbed such that people may come into contact with it, and the permanent structure, which is rendering such polluted soil inaccessible, is not disturbed in any manner. As required by Section 22a-133k-2(b)(3) of the Regulations of Connecticut State Agencies, the ELUR prohibits inaccessible soil from being exposed as a result of excavation or other intrusive activities. Should the Coal Pond/Coal Liner be significantly altered or removed in the future such that the underlying soils are no longer rendered inaccessible, the applicable regulatory processes are required to be followed to ensure the protection of human health and the environment.

If you have any questions, please contact me at (860)298-6226.

Sincerely,
TRC ENVIRONMENTAL CORPORATION



Marya B. Mahoney, LEP
Senior Project Manager

10226-CSTU-S3015

FOR DETAILS OF THIS AREA SEE DWG S3019

BULLDOZER GARAGE

PHASE II

PHASE I

LIMITS OF ENGINEERING FABRIC

LIMITS OF FABRIC FORM

LIMIT OF ENGINEERING FABRIC

EXISTING FENCE

RESERVE RECLAIM STRUCTURE

COAL STORAGE AREA

COAL PILE RUNOFF POND

EXISTING ABANDONED ABUTMENT WALLS (SEE NOTE 11)

WASTE PROCESSING FACILITY

EXST CULVERT

INSTALL 2-12" RCP CULVERTS

EXISTING RAILROAD CL AND TRESTLE

LEASE LINE

MW-4

MW-2 (REMOVE)

PI =N5210 E244 Δ =44°54' R =275' L =215.5' T =113.6'

PI =N4930 E304 Δ =24°13' L =42.3' T =21.5' R =100'

PI =N4970 E238 Δ =15°24' R =100' L =26.9' T =12.5

PI =N4520 E355 Δ =64°36' R =275' L =311.61' T =174.9'

PI =N4813 E157 Δ =34°09' R =100' L =59.61' T =30.71'

PI =N4847 E77 Δ =26°40' R =100' L =50.0' T =25.6'

333,800N

333,600N

333,400N

333,200N

333,000N

625,200E

625,400E

625,600E

625,700E

627,200E

EXISTING UTILITIES LEGEND

MH - MANHOLE
CB - CATCH BASIN
VP - VALVE PIT
OS - OIL SEPARATOR
LS - LIFT STATION

NOTES

1. CONCRETE ABUTMENT WALLS SHALL BE RAZED TO ELEVATION 2 FEET BELOW LINER ELEVATION.
2. ALL CONSTRUCTION ASSOCIATED WITH PAVING & ROADS BY CONTRACT 10226.71.0203.
3. ▭ INDICATES LIMITS OF GROUT FILLED SYNTHETIC FABRIC FORM.
4. EXISTING GRADE CONTOURS ARE INDICATED WITH FAINT LINES. HEAVY LINES INDICATE FINISH GRADE CONTOURS.
5. ALL CONTOURS ON THIS DWG ARE BASED ON PLANT DATUM.
6. CONTRACT 10226.71.0403 SHALL BE RESPONSIBLE FOR GRADING AROUND ALL CONVEYOR TOWER STRUCTURES, TRANSFER BUILDING AND WITHIN COAL STORAGE AREA.
7. ▨ INDICATES LIMITS OF ASPHALT PAVING BY SPEC 10226.71.0203.
8. ▩ INDICATES LIMITS OF ASPHALT PAVING BY SPEC 10226.71.0202.
9. PI LOCATIONS ARE GIVEN IN PLANT GRID COORDINATES.
10. PI* INDICATES APPROXIMATE LOCATIONS OF EXISTING ROADWAYS. THESE LOCATIONS SHALL BE FIELD CHECKED.
11. ▭ INDICATES LIMITS OF SEEDING BY SPEC 10226.71.0203

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	FLM
8	07-6-88	CONFORMS WITH CONSTRUCTION RECORDS – MC	EL	MC		
7	09-25-87	RELEASED FOR CONSTRUCTION	VD	LK		
6	01-22-87	GENERAL REVISIONS	VD	LK		
5	05-15-87	GENERAL REVISIONS	VD	LK		
4	03-30-87	RELEASED FOR CONSTR SPEC 71.0202	VD	LK		
3	02-13-87	GENERAL REVISIONS	VD	LK		
2	12-12-86	GENERAL REVISIONS	DPK	LK		
1	5-1-86	RELEASED FOR CONSTRUCTION, SPEC 71.0403	DPK	MK		
0	2-28-86	INITIAL ISSUE	DPK	LK		

TRUE PLANT

SCALE: 1" = 30'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT

SIGNED Raymond D. Kinsley Jr.
DATE 5/7/86 REG NO. 15029

STATE OF CONNECTICUT REGISTERED PROFESSIONAL ENGINEER

BLACK & VEATCH ENGINEERS-ARCHITECTS

ENGINEER DPK DRAWN MAK CHECKED DATE

The resource recovery facility designed for RESOURCE RECOVERY SYSTEMS COMBUSTION ENGINEERING, INCORPORATED, WINDSOR, CONNECTICUT 06095 AND IS NOT TO BE REPRODUCED OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OR APPARATUS EXCEPT WHERE PROVIDED FOR BY AGREEMENT WITH SAID COMPANY.

COMBUSTION ENGINEERING

CONNECTICUT RESOURCES RECOVERY AUTHORITY
MID - CONNECTICUT PROJECT

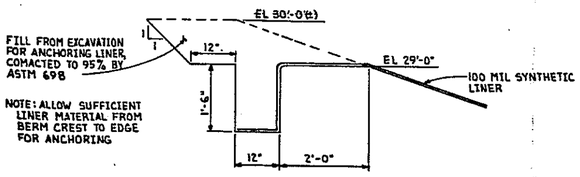
SITE - SITE PREPARATION
FINISH GRADE - COAL STORAGE AREA

PROJECT 10226 DRAWING NUMBER - CSTU-S3015 REV 8

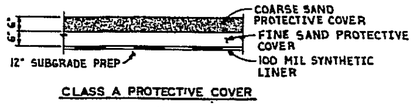
COOK

AREA

F-08-2648

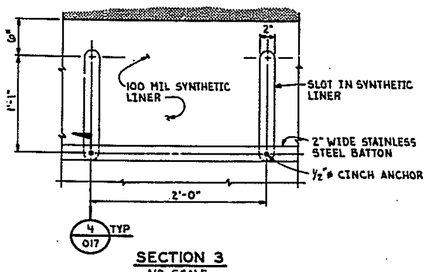


DETAIL 1
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SEE DWG S3016

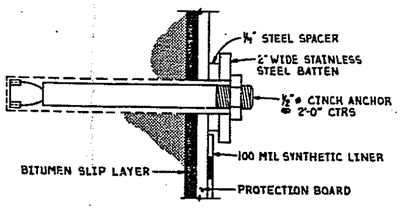


CLASS A PROTECTIVE COVER

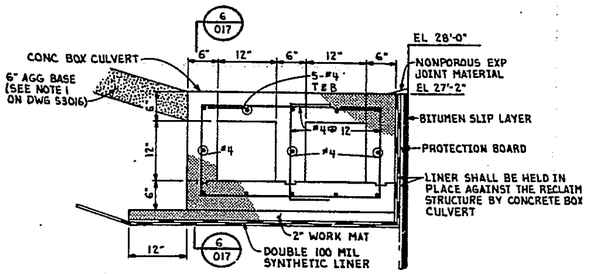
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SEE DWG S3016



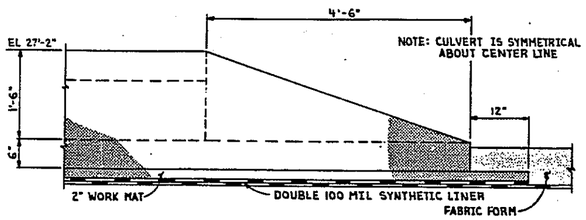
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NO SCALE
SEE DWG S3016



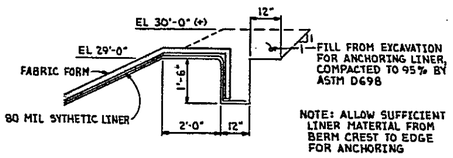
SECTION 4
NO SCALE
SEE THIS DWG



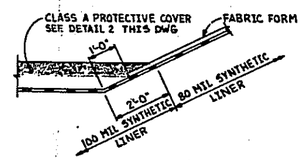
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SEE DWG S3016



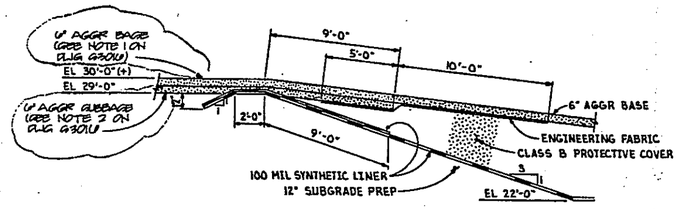
SECTION 8
NO SCALE
SEE THIS DWG



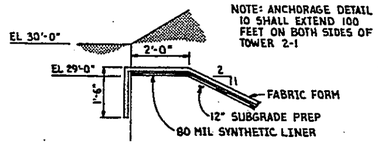
DETAIL 7
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SEE DWG S3016



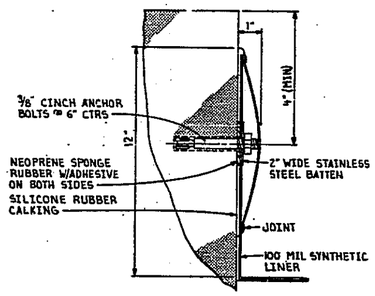
DETAIL 8
NO SCALE
SEE DWG S3016



DETAIL 9
NO SCALE
SEE DWG S3016

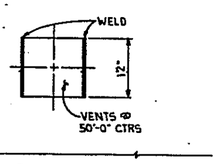


DETAIL 10
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SEE DWG S3016

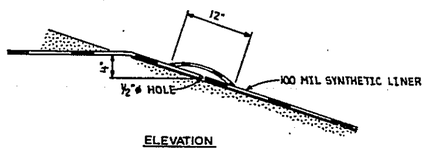


DETAIL 11
NO SCALE
SEE DWGS S3016 & S3017

NOTE: VENTS SHALL BE INSTALLED ONLY ON THE POND SLOPES AT THE WEST END OF THE COAL STORAGE AREA. VENTS SHALL NOT BE INSTALLED WHERE FABRIC FORM IS INSTALLED.

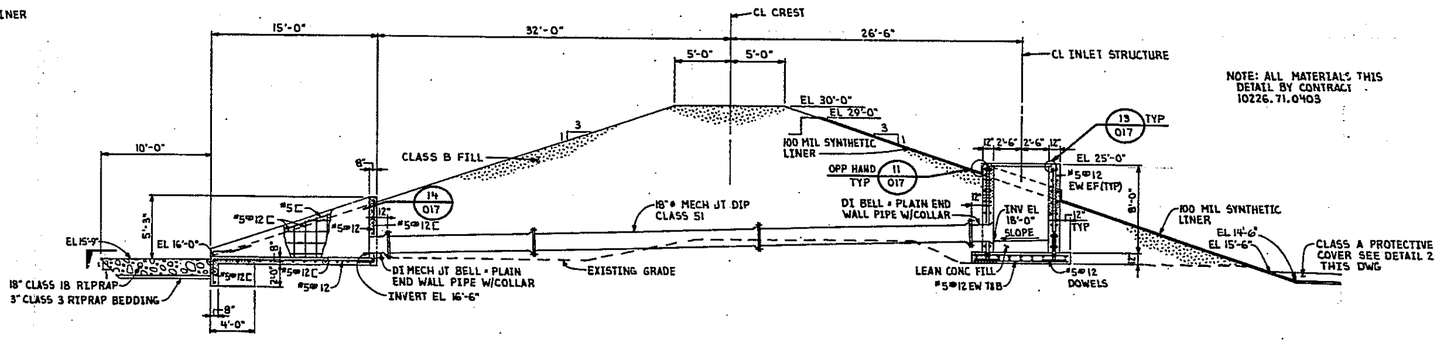


PLAN

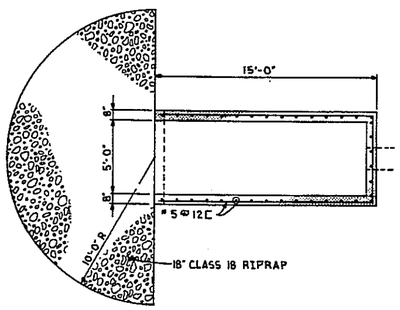


ELEVATION

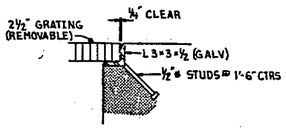
SYNTHETIC LINER GAS VENT DETAIL
NO SCALE
SEE DWG S3016



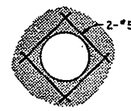
SECTION 12
SCALE: 3/16"=1'-0"
SEE DWG S3015



SECTION 14
SCALE: ½"=1'-0"
SEE THIS DWG



DETAIL 13
NO SCALE
SEE THIS DWG



TYPICAL REINFORCING DETAIL AT PIPES
NO SCALE

NOTES

1. ALL SYNTHETIC LINERS ARE SINGLE LAYER UNLESS NOTED OTHERWISE.
2. FOR ADDITIONAL NOTES SEE DWG 10226-CSTU-S3015.

This document is the property of RESOURCE RECOVERY SYSTEMS COMBUSTION ENGINEERING, INCORPORATED, WINDSOR, CONNECTICUT 06095 AND IS NOT TO BE REPRODUCED OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OR APPARATUS EXCEPT WHERE PROVIDED FOR BY AGREEMENT WITH SAID COMPANY.

COMBUSTION ENGINEERING

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP'D
2	7-8-88	CONFORMED TO CONSTRUCTION RECORDS	EC	WDO	
1	5-7-86	RELEASED FOR CONSTRUCTION, SPEC 71.0403	DN	LK	
0	2-28-86	INITIAL ISSUE	WK	LK	

SCALE: AS NOTED

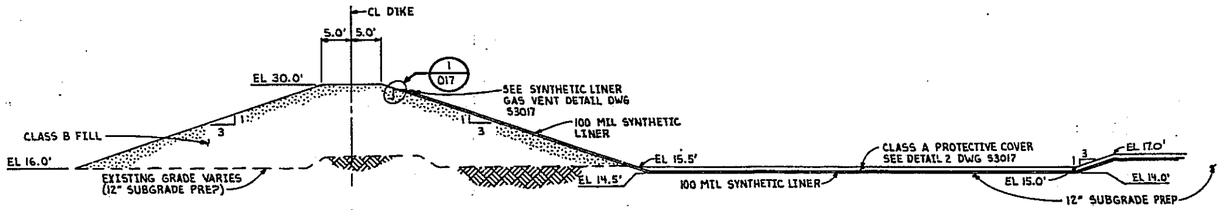
I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT
SIGNED Edward J. Kinsley Jr.
DATE 5/14/86 LIC NO. 14029

STATE OF CONNECTICUT EDWARD J. KINSLEY JR. No. 14029 REGISTERED PROFESSIONAL ENGINEER

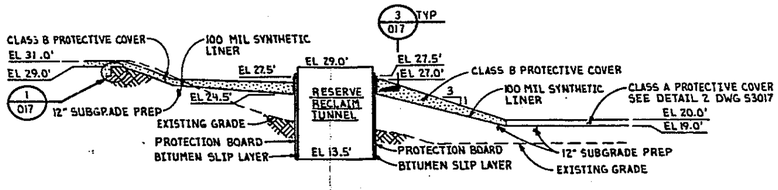
BLACK & VEATCH ENGINEERS-ARCHITECTS
ENGINEER EWM DRAWN MAK
CHECKED DATE

CONNECTICUT RESOURCES RECOVERY AUTHORITY
MID - CONNECTICUT PROJECT
SITE-SITE PREPARATION
COAL STORAGE AREA-SECTIONS & DETAILS

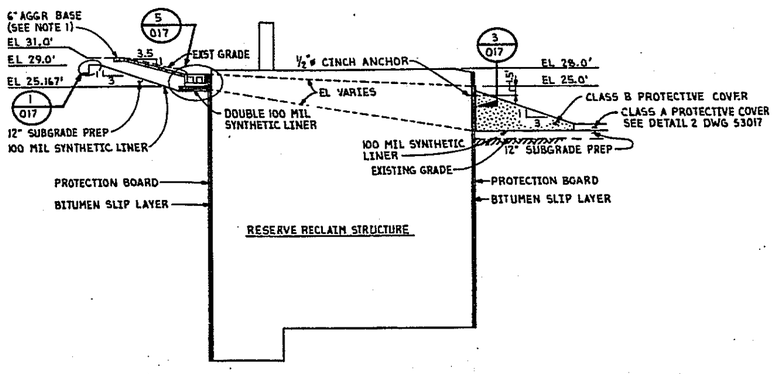
PROJECT 10226 DRAWING NUMBER -CSTU-S3017 REV 2
CODE
AREA



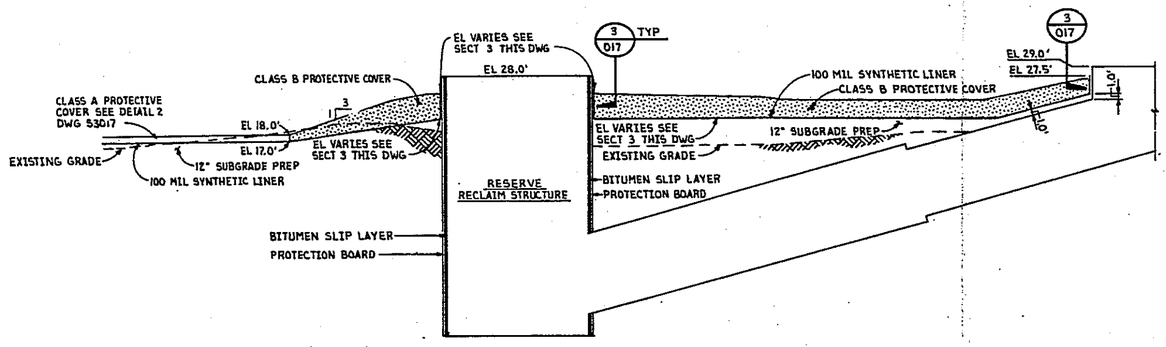
SECTION 1
SEE DWG S3015



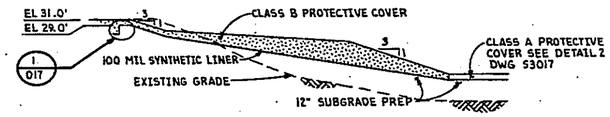
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SEE DWG S3015



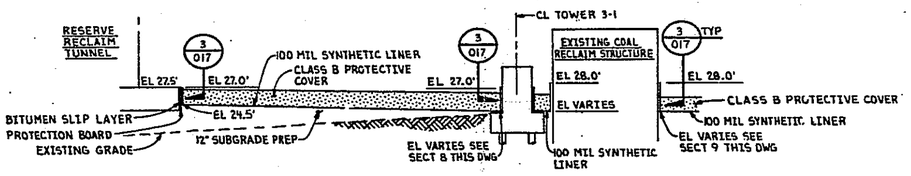
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SEE DWG S3015



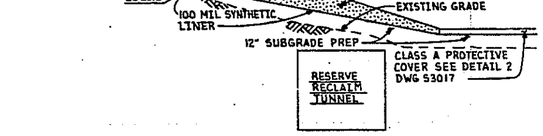
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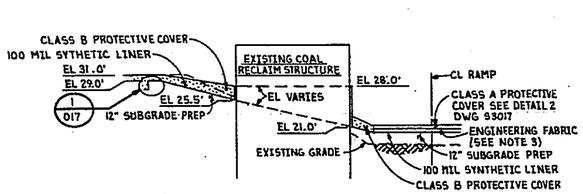
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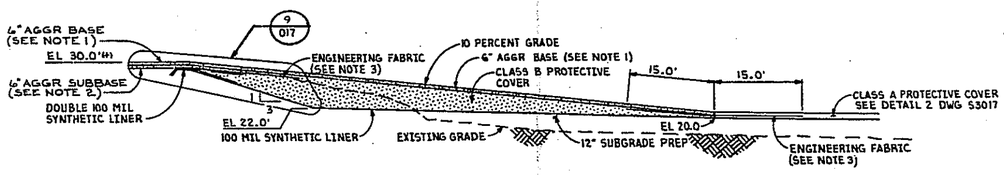
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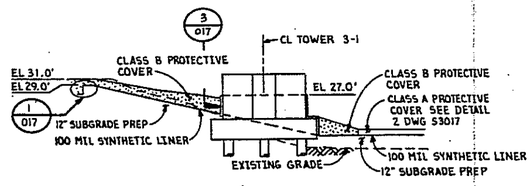
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SEE DWG S3015



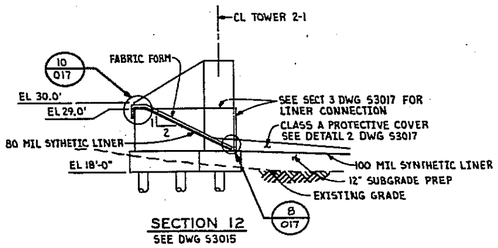
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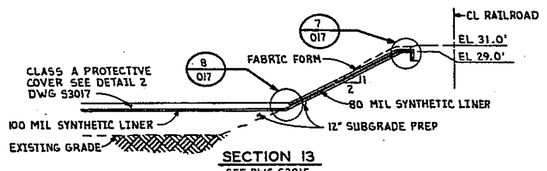
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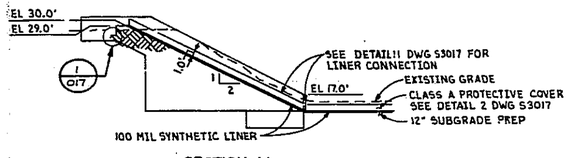
SECTION 8
SEE DWG S3015



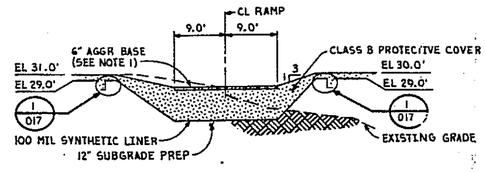
SECTION 12
SEE DWG S3015



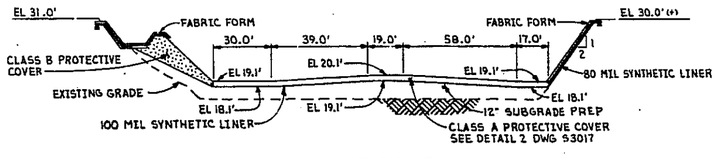
SECTION 13
SEE DWG S3015



SECTION 14
SEE DWG S3015



SECTION 11
SEE DWG S3015



SECTION 15
SCALE: HORIZ: 1"=30.0'
:VERT: 1"=10.0'
SEE DWG S3015

NOTES

1. AGGREGATE BASE TO BE PLACED UNDER CONTRACT 71.0203.
2. AGGREGATE SUBBASE TO BE PLACED UNDER CONTRACT 71.0203
3. ENGINEERING FABRIC SHALL BE PLACED ON TOP OF FINE SAND PROTECTIVE COVER (SEE DETAIL 2 DWG S3017) BEFORE PLACEMENT OF COARSE SAND PROTECTIVE COVER.
4. ALL SYNTHETIC LINERS ARE SINGLE LAYER UNLESS NOTED OTHERWISE.
5. FOR ADDITIONAL NOTES SEE DWG 10226-CSTU-S3015.

The drawings and specifications of RESOURCE RECOVERY SYSTEMS COMBUSTION ENGINEERING, INCORPORATED, WINDSOR, CONNECTICUT 06095 ARE NOT TO BE REPRODUCED OR USED TO FURNISH ANY INFORMATION FOR MAKING OF DRAWINGS OR APPARATUS EXCEPT WHERE PROVIDED FOR BY AGREEMENT WITH SAID COMPANY

COMBUSTION ENGINEERING

NO.	DATE	REVISIONS AND RECORD OF ISSUE	BY	CHK	APP	ELM
3	9-25-87	RELEASED FOR CONSTRUCTION, SPEC 71.0203				
2	5-15-87	GENERAL REVISIONS	VD	LK		
1	5-7-86	RELEASED FOR CONSTRUCTION, SPEC 71.0403	JN	LK		
0	2-28-86	INITIAL ISSUE	DN	LK		
4	7-8-88	CONFORMS WITH CONSTRUCTION RECORDS - NC	CL	JAC		

SCALE: 1" = 10'

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF CONNECTICUT
SIGNED Edward J. Kaiser Jr.
DATE 5/7/86 REG NO. 14049

STATE OF CONNECTICUT EDWARD J. KAISER, JR. No 14049 REGISTERED PROFESSIONAL ENGINEER

BLACK & VEATCH ENGINEERS-ARCHITECTS
ENGINEER EWM DRAWN MAK
CHECKED DATE

CONNECTICUT RESOURCES RECOVERY AUTHORITY
MID - CONNECTICUT PROJECT
SITE - SITE PREPARATION
COAL STORAGE AREA - SECTIONS & DETAILS

PROJECT 10226 DRAWING NUMBER CSTU-S3016 REV 4
CODE
AREA

21 Griffin Road North
Windsor, CT 06095

860.298.9692 PHONE
860.298.6399 FAX

www.TRCsolutions.com

December 10, 2015

Commissioner of the CTDEEP
c/o Michelle Bedson, ELUR Coordinator
Department of Energy and Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106

RE: Designation of Transformer and Electrical Equipment Foundations at the MIRA South Meadows Facility as Permanent Structures
300 Maxim Road &100 Reserve Road, Hartford, CT
REM ID Numbers: 4670 & 9427

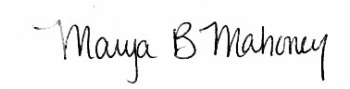
VIA E-MAIL

Dear Commissioner:

This letter hereby serves as a notification of the intent to designate the transformer and electrical equipment foundations present within ELUR Subject Areas E, F-1 and F-2 at the above-referenced site (eastern/central portion) as permanent structures. These large concrete equipment foundations serve to render underlying soils inaccessible. As indicated in the ELUR Decision Document prepared for this site, the polluted soil does not pose a risk to human health, provided the soil is not exposed, excavated or disturbed such that people may come into contact with it, and the permanent structures, which are rendering such polluted soil inaccessible, are not disturbed in any manner. As required by Section 22a-133k-2(b)(3) of the Regulations of Connecticut State Agencies, the ELUR prohibits inaccessible soil from being exposed as a result of excavation or other intrusive activities. Should the concrete foundations be removed in the future such that the underlying soils are no longer rendered inaccessible, the applicable regulatory processes are required to be followed to ensure the protection of human health and the environment.

If you have any questions, please contact me at (860)298-6226.

Sincerely,
TRC ENVIRONMENTAL CORPORATION



Marya B. Mahoney, LEP
Senior Project Manager

ATTACHMENT B

REFERENCE MAP

ATTACHMENT B: PERMANENT STRUCTURE REFERENCE MAP



MCA
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ENGINEERING • LAND SURVEYING • ENVIRONMENTAL CONSTRUCTION INSPECTION • GIS • WASTEWATER

1084 Cromwell Avenue, Suite A-2
Rocky Hill, CT 06067
Telephone: (860) 436-4364
Fax: (860) 436-4626
www.martinezcouch.com

300 MAXIM ROAD
100 RESERVE ROAD
HARTFORD, CONNECTICUT

PROPERTY OF MATERIALS INNOVATION AND RECYCLING AUTHORITY

NO.	DATE	REVISIONS	BY	CHK	APPV
5					
4	12-10-15	ATTORNEY COMMENTS	ASF	JB	
3	7-20-15	ATTORNEY COMMENTS	ASF	AM	
2	11-11-13	ATTORNEY COMMENTS	ASF	AM	
1	10-28-13	ATTORNEY COMMENTS	ASF	AM	

DRAWN BY: ASF | CHECKED BY: ARM | SCALE: AS NOTED | DATE: 3-8-13

EXHIBIT C: DECLARATION OF ENVIRONMENTAL LAND USE RESTRICTION AND GRANT OF EASEMENT, PROPERTY OF MATERIALS INNOVATION AND RECYCLING AUTHORITY
300 MAXIM ROAD AND 100 RESERVE ROAD
HARTFORD, CONNECTICUT

JOB NO.	DRAWING NUMBER	SHEET
32-154	32-154ELUR.DWG	4 OF 6

ATTACHMENT C

PHOTOGRAPHIC LOG OF PERMANENT STRUCTURES



PHOTO 1. Utility tower in northwestern corner of site (facing northwest).



PHOTO 2. View of utility tower foundations.



PHOTO 3. Billboard sign-post located south of the Charter Oak Bridge and adjacent to the Gate 20 entrance to the South Meadows facility (facing northeast).



PHOTO 4. Base of billboard sign-post (foundation obscured by vegetation).



PHOTO 5. Large electrical pole located to the south of the Charter Oak Bridge (facing west).



PHOTO 6. Close-up of a large electrical pole foundation and view of the second large electrical pole to the south.



PHOTO 7. View of the base of the second large electrical pole (foundation is the same as that shown in Photo 6).



PHOTO 8. Utility tower in the eastern portion of the site, adjacent to the concrete dike wall (facing northwest).



PHOTO 9. Utility tower foundations (covered with gravel).



PHOTO 10. View of the 23 kV (right) and 115 kV electrical (left) switchyards containing various pieces of equipment (facing southwest).



PHOTO 11. View of the 115 kV electrical switchyard and eastern portion of former 23 kV switchyard (adjacent to brick building).



PHOTO 12. Various electrical equipment foundations (including pole foundation) in the 23 kV electrical switchyard (facing northwest).



PHOTO 13. Various electrical equipment foundations in the 115 kV electrical switchyard (facing southwest).



PHOTO 14. View of various electrical equipment foundations within the 115 kV electrical switchyard (foreground) and into the former 23 kV electrical switchyard (background).



PHOTO 15. Backflow preventer shed (red metal building).



PHOTO 16. Utility towers in the eastern portion of the former fuel farm (facing northwest and showing some of the foundations).



PHOTO 17. Utility towers in the eastern portion of the former fuel farm (facing east/northeast and showing more of the foundations).



PHOTO 18. Large electrical pole located south/southeast of the 115 kV electrical switchyard (facing south).



PHOTO 19. Partial view of fuel oil aboveground storage tank located in the former fuel farm (facing southeast).



PHOTO 20. Pump house (small blue building) in the former fuel farm (facing south).



PHOTO 21. Another view (facing southeast) of the pump house building in the former fuel farm.



PHOTO 22. Concrete end-wall at the far southeastern end of the former fuel farm (facing southeast).



PHOTO 23. View, facing south, into the jet yard showing concrete pads/ foundations associated with the jet turbines and other equipment.



PHOTO 24. View, facing south, into the jet yard showing concrete pads/foundations associated with the jet turbines and other equipment.



PHOTO 25. Jet turbines and other electrical equipment located on concrete pads and foundations in the jet yard.



PHOTO 26. View of the southern portion of the jet yard (facing southwest).



PHOTO 27. Concrete pads and foundations in the southern portion of the jet yard.



PHOTO 28. Concrete pads and foundations in the southern portion of the jet yard (facing north/northwest).



PHOTO 29. Truck scale at the southern end of the Power Block Facility (PBF) (facing east).



PHOTO 30. View of the western portion of the coal pond liner.



PHOTO 31. Protective concrete pillows overlying the northern portion of the coal pond liner (facing southwest).



PHOTO 32. Concrete structure along the northern side of the coal pond (eastern-most structure).



PHOTO 33. Concrete structure along the northern side of the coal pond (western-most structure).



PHOTO 34. View, facing east, of the former coal conveyor system.



PHOTO 35. View, facing east, of the former coal conveyor system.



PHOTO 36. Concrete portion of the former coal conveyor system (facing southeast).



PHOTO 37. Concrete portions of the former coal conveyor system (concrete intake tunnel portion as well as concrete foundations for covered conveyor supports).



PHOTO 38. View, facing north, of the refuse-derived fuel (RDF) conveyor system and concrete foundations under the conveyor supports.



PHOTO 39. View, facing southeast, of conveyor supports (concrete foundations underlie those supports as seen in this photo and in Photo 38).



PHOTO 40. View, facing southeast, of conveyor supports (concrete foundations underlie those supports as seen in this photo and in Photo 38).



PHOTO 41. View of concrete underlying the conveyor system supports adjacent to the building (see left side of photo) and in the photo background.



PHOTO 42. View, facing south/southeast, of more concrete foundations underlying conveyor supports.



PHOTO 43. One of the various concrete pads located in close proximity to one another at the southeastern corner of the main PBF building.



PHOTO 44. Various concrete pads located in close proximity to one another at the southeastern corner of the main PBF building.



PHOTO 45. Various concrete pads located in close proximity to one another at the southeastern corner of the main PBF building (in foreground and background of photo).



PHOTO 46. Vertical storage tanks to the southeast of the main PBF building.



PHOTO 47. Vertical storage tanks to the southeast of the main PBF building and adjacent to the concrete flood dike wall.



PHOTO 48. View to the north/northeast of the “concrete structure” as identified on site mapping (see structure on the right-hand side of the photo.



PHOTO 49. View to the northeast of the “concrete structure” as identified on site mapping.



PHOTO 50. Concrete flood dike wall in the eastern portion of the site.



PHOTO 51. Concrete flood dike wall in the eastern portion of the site (view to the northwest).



PHOTO 52. Concrete flood dike wall in the eastern portion of the site (view further to the northwest than in previous photos).



PHOTO 53. Silo along eastern side of main PBF building.



PHOTO 54. Concrete pad/foundation underlying silo.



PHOTO 55. Concrete foundations underlying waste processing facility (WPF) ventilation equipment (northern portion of WPF).



PHOTO 56. Concrete foundations underlying WPF ventilation equipment.



PHOTO 57. Concrete foundations underlying WPF ventilation equipment.



PHOTO 58. View, facing west, of thermal oxidizing equipment.



PHOTO 59. Concrete foundations underlying thermal oxidizing equipment (in background).



PHOTO 60. Truck ramp along eastern side of WPF building (facing west).



PHOTO 61. Truck ramp along eastern side of WPF building (facing north).



PHOTO 62. Concrete foundations underlying ventilation equipment in the eastern portion of the WPF.



PHOTO 63. Truck scales to the south of the WPF building.



PHOTO 64. Truck scales to the south of the WPF building.



PHOTO 65. View to the east of the truck scales to the south of the WPF building.



PHOTO 66. View to the west of the truck scales to the south of the WPF building.



PHOTO 67. Truck scale to the southwest of the WPF building near Maxim Road (facing southeast).



PHOTO 68. Truck scale to the southwest of the WPF building near Maxim Road (facing south).

From: Hill, Peter
To: Mahoney, Marya
Subject: RE: Response to your voicemail
Date: Tuesday, December 19, 2017 10:37:14 AM

HI Marya,

I just finished my review of the permanent structure submittal and I don't have any comments or questions.

Thank you,

Pete

From: Mahoney, Marya [mailto:MMahoney@trcsolutions.com]
Sent: Friday, September 22, 2017 1:03 PM
To: Hill, Peter
Subject: Response to your voicemail

Hi Pete,

I hope that this email finds you well. I just listened to your voicemail and thought since it's the tail end of the lunch hour, I would email you a brief update as opposed to bugging you by phone. We are making headway on the MIRA ELUR. We have been to the site to identify several permanent structures which I will be summarizing in a draft letter to you (as we had previously discussed); I will have that draft letter to you next week (prior to Wednesday). Also, I will be making edits to the O&M plan under which we have been operating in order to incorporate visual inspections of the permanent structures and pavement areas. That will follow shortly behind the draft summary letter. I reviewed the language that you sent over regarding Subject Areas Q&R (the wetlands) and I did not have any comments or questions with respect to your text additions to the Decision Doc. Speaking of the Dec.Doc., following right on the heels of amending the O&M plan, I will be adding the generalized language to the Dec Doc about the use of smaller concrete structures (e.g., catch basins, manhole structures, etc.) to render soils inaccessible per our discussion last month.

Take care and I'm sure we'll be talking very soon!

Marya

Marya B. Mahoney, LEP
Senior Project Manager / Geologist

TRC
21 Griffin Road North
Windsor, CT 06095

Main: 860.298.9692

APPENDIX C

INSPECTION FORMS

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA C – FORMER MERCURY BOILER ROOM ADDITION

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for cracks in paved surface or evidence of subsidence):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA D – FD FAN AREA

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Verify there are no cracks in concrete, concrete surface coating is intact, seals around joints are in good condition and signs bearing the M_L mark are still visible and legible):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS FACILITY

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA G-a – AREA 3-1

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for signs of erosion that may impact HDPE or orange geotextile barrier layer):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA I – FUEL LINE DELINEATION AREA 2

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for evidence of subsidence):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA M – WPF STORMWATER DETENTION BASIN

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Verify crushed stone layer and underlying fabric are not disturbed, fabric should not be exposed. Inspect side slopes and splash pads for evidence of erosion):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA N – WPF AREA 3

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for signs of erosion that may impact HDPE barrier layer):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA O – WPF AREA 1

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for signs of erosion that may impact HDPE barrier layer):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS **FACILITY**

ENGINEERED CONTROL INSPECTION AND MAINTENANCE REPORT
SUBJECT AREA P – WPF AREA 2

Inspector: _____ Date: _____ Time:_____

Inspection Event:

☐ Routine – Semi-Annual

☐ Other Explanation: _____

Site Conditions (Check for signs of erosion that may impact HDPE barrier layer):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

_____

_____

Signature:_____ Printed Name: _____

Attachments: Photos

SOUTH MEADOWS FACILITY

PERMANENT STRUCTURES INSPECTION FORM
(PERMANENT STRUCTURES 1-28)

Inspector: _____ Date: _____ Time:_____

Permanent Structure Name
and Number (Use Ref Map): _____

Inspection Event: Explanation: _____

- ☐ Routine – Annual
- ☐ Other

Site Conditions (Check for continued presence and overall integrity of structure to render underlying soils inaccessible):

_____

_____

Recommended Remedial Actions and Schedule of Those Events:

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_____

Signature:_____ Printed Name: _____

Attachments: Photos

APPENDIX D

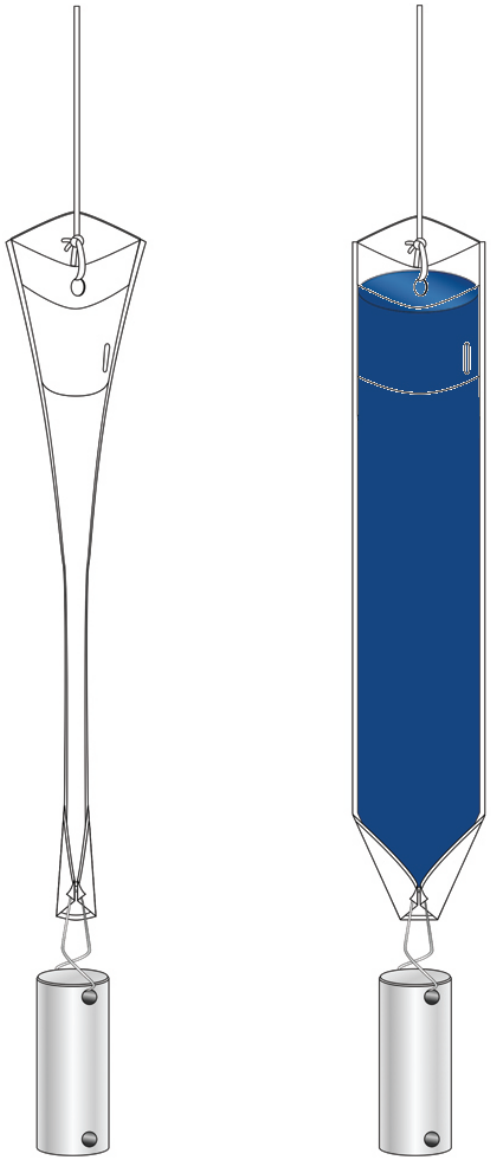
HYDRASLEEVE SOPS AND FIELD MANUALS
LOW-FLOW GROUND WATER SAMPLING SOPS
TRC LNAPL GAUGING SOP

HYDRASleeve™

Simple by Design

US Patent No. 6,481,300; No. 6,837,120 others pending

Standard Operating Procedure: Sampling Ground Water with a HydraSleeve



This Guide should be used in addition to field manuals appropriate to sampling device (i.e., HydraSleeve or Super Sleeve).

Find the appropriate field manual on the HydraSleeve website at http://www.hydrasleeve.com.

For more information about the HydraSleeve, or if you have questions, contact: GeoInsight, 2007 Glass Road, Las Cruces, NM 88005, 1-800-996-2225, info@hydrasleeve.com.

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Introduction

The HydraSleeve is classified as a no-purge (passive) grab sampling device, meaning that it is used to collect ground-water samples directly from the screened interval of a well without having to purge the well prior to sample collection. When it is used as described in this Standard Operating Procedure (SOP), the HydraSleeve causes no drawdown in the well (until the sample is withdrawn from the water column) and only minimal disturbance of the water column, because it has a very thin cross section and it displaces very little water (<100 ml) during deployment in the well. The HydraSleeve collects a sample from within the screen only, and it excludes water from any other part of the water column in the well through the use of a self-sealing check valve at the top of the sampler. It is a single-use (disposable) sampler that is not intended for reuse, so there are no decontamination requirements for the sampler itself.

The use of no-purge sampling as a means of collecting representative ground-water samples depends on the natural movement of ground water (under ambient hydraulic head) from the formation adjacent to the well screen through the screen. Robin and Gillham (1987) demonstrated the existence of a dynamic equilibrium between the water in a formation and the water in a well screen installed in that formation, which results in formation-quality water being available in the well screen for sampling at all times. No-purge sampling devices like the HydraSleeve collect this formation-quality water as the sample, under undisturbed (non-pumping) natural flow conditions. Samples collected in this manner generally provide more conservative (i.e., higher concentration) values than samples collected using well-volume purging, and values equivalent to samples collected using low-flow purging and sampling (Parsons, 2005).

Applications of the HydraSleeve

The HydraSleeve can be used to collect representative samples of ground water for all analytes (volatile organic compounds [VOCs], semi-volatile organic compounds [SVOCs], common metals, trace metals, major cations and anions, dissolved gases, total dissolved solids, radionuclides, pesticides, PCBs, explosive compounds, and all other analytical parameters). Designs are available to collect samples from wells from 1” inside diameter and larger. The HydraSleeve can collect samples from wells of any yield, but it is especially well-suited to collecting samples from low-yield wells, where other sampling methods can’t be used reliably because their use results in dewatering of the well screen and alteration of sample chemistry (McAlary and Barker, 1987).

The HydraSleeve can collect samples from wells of any depth, and it can be used for single-event sampling or long-term ground-water monitoring programs. Because of its thin cross section and flexible construction, it can be used in narrow, constricted or damaged wells where rigid sampling devices may not fit. Using multiple HydraSleeves deployed in series along a single suspension line or tether, it is also possible to conduct in-well vertical profiling in wells in which contaminant concentrations are thought to be stratified.

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As with all groundwater sampling devices, HydraSleeves should not be used to collect groundwater samples from wells in which separate (non-aqueous) phase hydrocarbons (i.e., gasoline, diesel fuel or jet fuel) are present because of the possibility of incorporating some of the separate-phase hydrocarbon into the sample.

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Description of the HydraSleeve

The HydraSleeve (Figure 1) consists of the following basic components:

- A suspension line or tether (A.), attached to the spring clip or directly to the top of the sleeve to deploy the device into and recover the device from the well. Tethers with depth indicators marked in 1-foot intervals are available from the manufacturer.
- A long, flexible, 4-mil thick lay-flat polyethylene sample sleeve (C.) sealed at the bottom (this is the sample chamber), which comes in different sizes, as discussed below with a self-sealing reed-type flexible polyethylene check valve built into the top of the sleeve (B.) to prevent water from entering or exiting the sampler except during sample acquisition.
- A reusable stainless-steel weight with clip (D.), which is attached to the bottom of the sleeve to carry it down the well to its intended depth in the water column. Bottom weights available from the manufacturer are 0.75" OD and are available in three sizes: 5 oz. (2.5" long); 8 oz. (4" long); and 16 oz. (8" long). In lieu of a bottom weight, an optional top weight may be attached to the top of the HydraSleeve to carry it to depth and to compress it at the bottom of the well (not shown in Figure 1);
- A discharge tube that is used to puncture the HydraSleeve after it is recovered from the well so the sample can be decanted into sample bottles (not shown).
- Just above the self-sealing check valve at the top of the sleeve are two holes which provide attachment points for the spring clip and/or suspension line or tether. At the bottom of the sample sleeve are two holes which provide attachment points for the weight clip and weight.

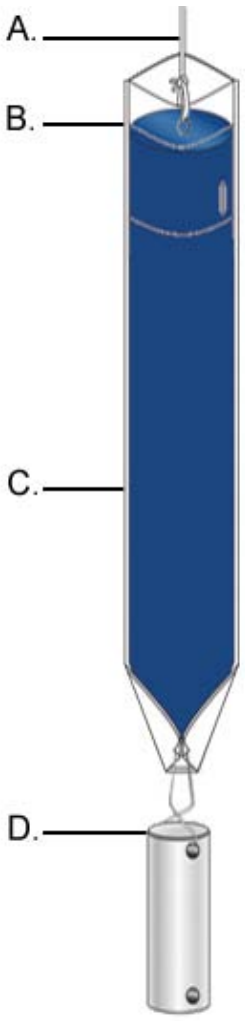


Figure 1. HydraSleeve components.

Note: The sample sleeve and the discharge tube are designed for one-time use and are disposable. The spring clip, weight and weight clip may be reused after thorough cleaning. Suspension cord is generally disposed after one use although, if it is dedicated to the well, it may be reused at the discretion of the sampling personnel.

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Selecting the HydraSleeve Size to Meet Site-Specific Sampling Objectives

It is important to understand that each HydraSleeve is able to collect a finite volume of sample because, after the HydraSleeve is deployed, you only get one chance to collect an undisturbed sample. Thus, the volume of sample required to meet your site-specific sampling and analytical requirements will dictate the size of HydraSleeve you need to meet these requirements.

The volume of sample collected by the HydraSleeve varies with the diameter and length of the HydraSleeve. Dimensions and volumes of available HydraSleeve models are detailed in Table 1.

Table 1. Dimensions and volumes of HydraSleeve models.

Diameter	Volume	Length	Lay-Flat Width	Filled Dia.
2-Inch HydraSleeves				
Standard 625-ml HydraSleeve	625 ml	< 30”	2.5”	1.4”
Standard 1-Liter HydraSleeve	1 Liter	38”	3”	1.9”
1-Liter HydraSleeve SS	1 Liter	36”	3”	1.9”
2-Liter HydraSleeve SS	2 Liters	60”	3”	1.9”
4-Inch HydraSleeves				
Standard 1.6-Liter HydraSleeve	1.6 Liters	30”	3.8”	2.3”
Custom 2-Liter HydraSleeve	2 Liters	36”	4”	2.7”

HydraSleeves can be custom-fabricated by the manufacturer in varying diameters and lengths to meet specific volume requirements. HydraSleeves can also be deployed in series (i.e., multiple HydraSleeves attached to one tether) to collect additional sample to meet specific volume requirements, as described below.

If you have questions regarding the availability of sufficient volume of sample to satisfy laboratory requirements for analysis, it is recommended that you contact the laboratory to discuss the minimum volumes needed for each suite of analytes. Laboratories often require only 10% to 25% of the volume they specify to complete analysis for specific suites of analytes, so they can often work with much smaller sample volumes that can easily be supplied by a HydraSleeve.

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HydraSleeve Deployment

Information Required Before Deploying a HydraSleeve

Before installing a HydraSleeve in any well, you will need to know the following:

- The inside diameter of the well
- The length of the well screen
- The water level in the well
- The position of the well screen in the well
- The total depth of the well

The inside diameter of the well is used to determine the appropriate HydraSleeve diameter for use in the well. The other information is used to determine the proper placement of the HydraSleeve in the well to collect a representative sample from the screen (see HydraSleeve Placement, below), and to determine the appropriate length of tether to attach to the HydraSleeve to deploy it at the appropriate position in the well.

Most of this information (with the exception of the water level) should be available from the well log; if not, it will have to be collected by some other means. The inside diameter of the well can be measured at the top of the well casing, and the total depth of the well can be measured by sounding the bottom of the well with a weighted tape. The position and length of the well screen may have to be determined using a down-hole camera if a well log is not available. The water level in the well can be measured using any commonly available water-level gauge.

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HydraSleeve Placement

The HydraSleeve is designed to collect a sample directly from the well screen, and it fills by pulling it up through the screen a distance equivalent to 1 to 1.5 times its length. This upward motion causes the top check valve to open, which allows the device to fill. To optimize sample recovery, it is recommended that the HydraSleeve be placed in the well so that the bottom weight rests on the bottom of the well and the top of the HydraSleeve is as close to the bottom of the well screen as possible. This should allow the sampler to fill before the top of the device reaches the top of the screen as it is pulled up through the water column, and ensure that only water from the screen is collected as the sample. In short-screen wells, or wells with a short water column, it may be necessary to use a top-weight on the HydraSleeve to compress it in the bottom of the well so that, when it is recovered, it has room to fill before it reaches the top of the screen.

Example

2" ID PVC well, 50' total depth, 10' screen at the bottom of the well, with water level above the screen (the entire screen contains water).

Correct Placement (figure 2): Using a standard HydraSleeve for a 2" well (2.6" flat width/1.5" filled OD x 30" long, 650 ml volume), deploy the sampler so the weight (an 8 oz., 4"-long weight with a 2"-long clip) rests at the bottom of the well. The top of the sleeve is thus set at about 36" above the bottom of the well. When the sampler is recovered, it will be pulled upward approximately 30" to 45" before it is filled; therefore, it is full (and the top check valve closes) at approximately 66" (5 ½ feet) to 81" (6 ¾ feet) above the bottom of the well, which is well before the sampler reaches the top of the screen. In this example, only water from the screen is collected as a sample.

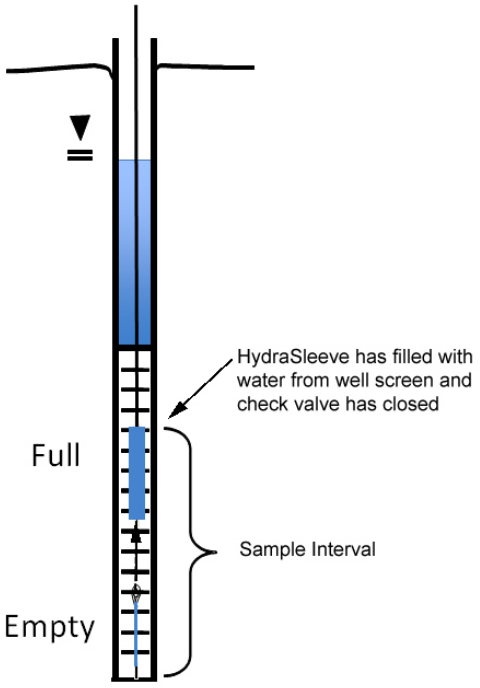


Figure 2. Correct placement of HydraSleeve.

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Incorrect Placement (figure 3): If the well screen in this example was only 5' long, and the HydraSleeve was placed as above, it would not fill before the top of the device reached the top of the well screen, so the sample would include water from above the screen, which may not have the same chemistry.

The solution? Deploy the HydraSleeve with a top weight, so that it is collapsed to within 6" to 9" of the bottom of the well. When the HydraSleeve is recovered, it will fill within 39" (3 ¼ feet) to 54" (4 ½ feet) above the bottom of the well, or just before the sampler reaches the top of the screen, so it collects only water from the screen as the sample.

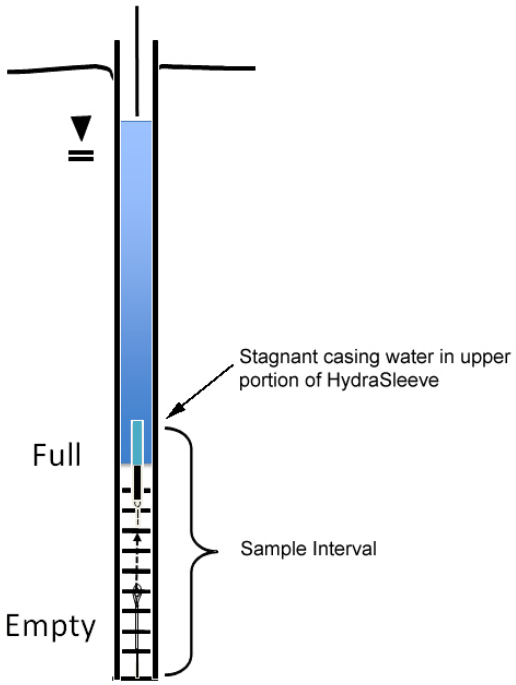


Figure 3. Incorrect placement of HydraSleeve.

This example illustrates one of many types of HydraSleeve placements. More complex placements are discussed in a later section.

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Procedures for Sampling with the HydraSleeve

Collecting a ground-water sample with a HydraSleeve is a simple one-person operation.

Note: Before deploying the HydraSleeve in the well, collect the depth-to-water measurement that you will use to determine the preferred position of the HydraSleeve in the well. This measurement may also be used with measurements from other wells to create a ground-water contour map. If necessary, also measure the depth to the bottom of the well to verify actual well depth to confirm your decision on placement of the HydraSleeve in the water column.

Measure the correct amount of tether needed to suspend the HydraSleeve in the well so that the weight will rest on the bottom of the well (or at your preferred position in the well). Make sure to account for the need to leave a few feet of tether at the top of the well to allow recovery of the sleeve

Note: Always wear sterile gloves when handling and discharging the HydraSleeve.

I. Assembling the HydraSleeve

1. Remove the HydraSleeve from its packaging, unfold it, and hold it by its top.

2. Crimp the top of the HydraSleeve by folding the hard polyethylene reinforcing strips at the holes.

3. Attach the spring clip to the holes to ensure that the top will remain open until the sampler is retrieved.

4. Attach the tether to the spring clip by tying a knot in the tether.

Note: Alternatively, attach the tether to one (NOT both) of the holes at the top of the Hydrasleeve by tying a knot in the tether.

5. Fold the flaps with the two holes at the bottom of the HydraSleeve together and slide the weight clip through the holes.

6. Attach a weight to the bottom of the weight clip to ensure that the HydraSleeve will descend to the bottom of the well.

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II. Deploying the HydraSleeve

1. Using the tether, carefully lower the HydraSleeve to the bottom of the well, or to your preferred depth in the water column

   During installation, hydrostatic pressure in the water column will keep the self-sealing check valve at the top of the HydraSleeve closed, and ensure that it retains its flat, empty profile for an indefinite period prior to recovery.

Note: Make sure that it is not pulled upward at any time during its descent. If the HydraSleeve is pulled upward at a rate greater than 0.5'/second at any time prior to recovery, the top check valve will open and water will enter the HydraSleeve prematurely.

2. Secure the tether at the top of the well by placing the well cap on the top of the well casing and over the tether.

Note: Alternatively, you can tie the tether to a hook on the bottom of the well cap (you will need to leave a few inches of slack in the line to avoid pulling the sampler up as the cap is removed at the next sampling event).

III. Equilibrating the Well

The equilibration time is the time it takes for conditions in the water column (primarily flow dynamics and contaminant distribution) to restabilize after vertical mixing occurs (caused by installation of a sampling device in the well).

- Situation: The HydraSleeve is deployed for the first time or for only one time in a well

  The HydraSleeve is very thin in cross section and displaces very little water (<100 ml) during deployment so, unlike most other sampling devices, it does not disturb the water column to the point at which long equilibration times are necessary to ensure recovery of a representative sample.

  In most cases, the HydraSleeve can be recovered immediately (with no equilibration time) or within a few hours. In regulatory jurisdictions that impose specific requirements for equilibration times prior to recovery of no-purge sampling devices, these requirements should be followed.

- Situation: The HydraSleeve is being deployed for recovery during a future sampling event

  In periodic (i.e., quarterly or semi-annual) sampling programs, the sampler for the current sampling event can be recovered and a new sampler (for the next sampling event)

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deployed immediately thereafter, so the new sampler remains in the well until the next sampling event.

Thus, a long equilibration time is ensured and, at the next sampling event, the sampler can be recovered immediately. This means that separate mobilizations, to deploy and then to recover the sampler, are not required. HydraSleeves can be left in a well for an indefinite period of time without concern.

IV. HydraSleeve Recovery and Sample Collection

1. Hold on to the tether while removing the well cap.

2. Secure the tether at the top of the well while maintaining tension on the tether (but without pulling the tether upwards)

3. Measure the water level in the well.

4. In one smooth motion, pull the tether up between 30” to 45” (36” to 54” for the longer HydraSleeve) at a rate of about 1’ per second (or faster).

   The motion will open the top check valve and allow the HydraSleeve to fill (it should fill in about 1 to 1.5 times the length of the HydraSleeve). This is analogous to coring the water column in the well from the bottom up.

   When the HydraSleeve is full, the top check valve will close. You should begin to feel the weight of the HydraSleeve on the tether and it will begin to displace water. The closed check valve prevents loss of sample and entry of water from zones above the well screen as the HydraSleeve is recovered.

5. Continue pulling the tether upward until the HydraSleeve is at the top of the well.

6. Decant and discard the small volume of water trapped in the Hydrasleeve above the check valve by turning the sleeve over.

V. Sample Collection

Note: Sample collection should be done immediately after the HydraSleeve has been brought to the surface to preserve sample integrity.

1. Remove the discharge tube from its sleeve.

2. Hold the HydraSleeve at the check valve.

3. Puncture the HydraSleeve just below the check valve with the pointed end of the discharge tube

4. Discharge water from the HydraSleeve into your sample containers.

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Control the discharge from the HydraSleeve by either raising the bottom of the sleeve, by squeezing it like a tube of toothpaste, or both.

5. Continue filling sample containers until all are full.

Measurement of Field Indicator Parameters

Field indicator parameter measurement is generally done during well purging and sampling to confirm when parameters are stable and sampling can begin. Because no-purge sampling does not require purging, field indicator parameter measurement is not necessary for the purpose of confirming when purging is complete.

If field indicator parameter measurement is required to meet a specific non-purging regulatory requirement, it can be done by taking measurements from water within a HydraSleeve that is not used for collecting a sample to submit for laboratory analysis (i.e., a second HydraSleeve installed in conjunction with the primary sample collection HydraSleeve [see Multiple Sampler Deployment below]).

Alternate Deployment Strategies

Deployment in Wells with Limited Water Columns

For wells in which only a limited water column exists to be sampled, the HydraSleeve can be deployed with an optional top weight instead of a bottom weight, which collapses the HydraSleeve to a very short (approximately 6” to 9”) length, and allows the HydraSleeve to fill in a water column only 36” to 45” in height.

Multiple Sampler Deployment

Multiple sampler deployment in a single well screen can accomplish two purposes:

- It can collect additional sample volume to satisfy site or laboratory-specific sample volume requirements.
- It can accommodate the need for collecting field indicator parameter measurements.
- It can be used to collect samples from multiple intervals in the screen to allow identification of possible contaminant stratification.

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It is possible to use up to 3 standard 30" HydraSleeves deployed in series along a single tether to collect samples from a 10' long well screen without collecting water from the interval above the screen.

The samplers must be attached to the tether at both the top and bottom of the sleeve. Attach the tether at the top with a stainless-steel clip (available from the manufacturer). Attach the tether at the bottom using a cable tie. The samplers must be attached as follows (figure 4):

- The first (attached to the tether as described above, with the weight at the bottom) at the bottom of the screen
- The second attached immediately above the first
- The third (attached the same as the second) immediately above the second

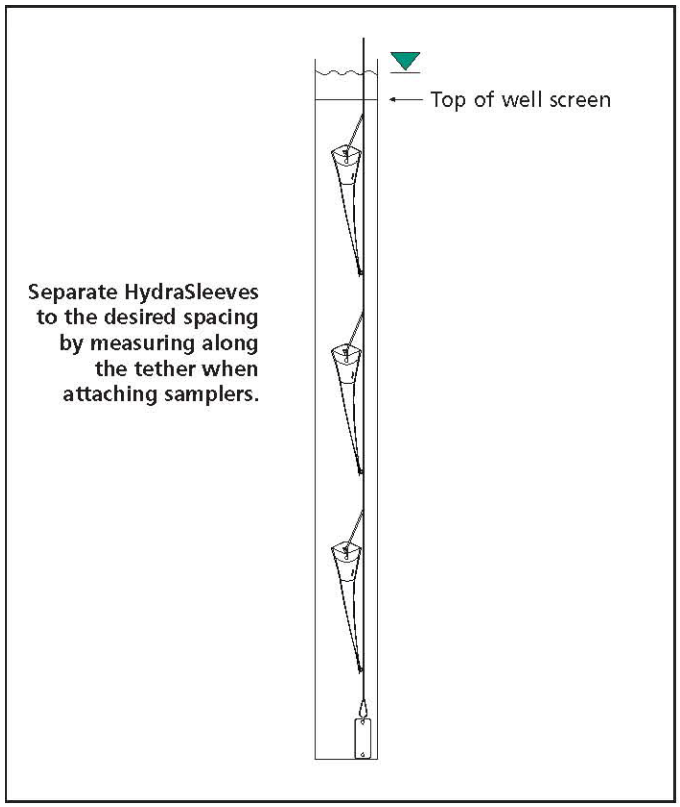


Figure 4. Multiple HydraSleeve deployment.

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Alternately, the first sampler can be attached to the tether as described above, a second attached to the bottom of the first using a short length of tether (in place of the weight), and the third attached to the bottom of the second in the same manner, with the weight attached to the bottom of the third sampler (figure 5).

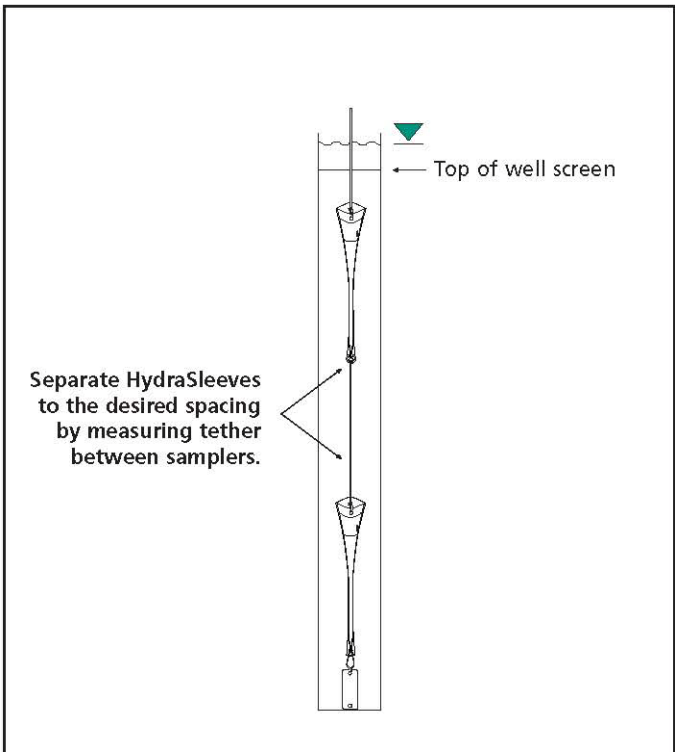


Figure 5. Alternative method for deploying multiple HydraSleeves.

In either case, when attaching multiple HydraSleeves in series, more weight may be required to hold the samplers in place in the well than would be required with a single sampler. Recovery of multiple samplers and collection of samples is done in the same manner as for single sampler deployments.

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Post-Sampling Activities

The recovered HydraSleeve and the sample discharge tubing should be disposed as per the solid waste management plan for the site. To prepare for the next sampling event, a new HydraSleeve can be deployed in the well (as described previously) and left in the well until the next sampling event, at which time it can be recovered.

The weight and weight clip can be reused on this sampler after they have been thoroughly cleaned as per the site equipment decontamination plan. The tether may be dedicated to the well and reused or discarded at the discretion of sampling personnel.

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References

McAlary, T. A. and J. F. Barker, 1987, Volatilization Losses of Organics During Ground-Water Sampling From Low-Permeability Materials, Ground-Water Monitoring Review, Vol. 7, No. 4, pp. 63-68

Parsons, 2005, Results Report for the Demonstration of No-Purge Ground-Water Sampling Devices at Former McClellan Air Force Base, California; Contract F44650-99-D-0005, Delivery Order DKO1, U.S. Army Corps of Engineers (Omaha District), U.S. Air Force Center for Environmental Excellence, and U.S. Air Force Real Property Agency

Robin, M. J. L. and R. W. Gillham, 1987, Field Evaluation of Well Purging Procedures, Ground-Water Monitoring Review, Vol. 7, No. 4, pp. 85-93

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HYDRASleeve

Simple by Design

US Patents No. 6,481,300; No. 6,837,120; others pending

Field Manual

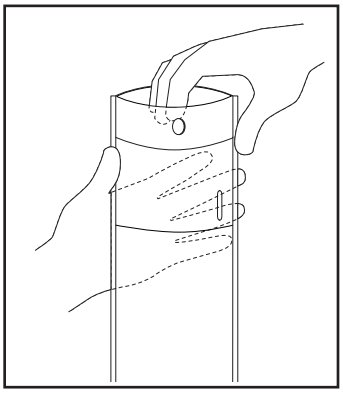
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Introduction

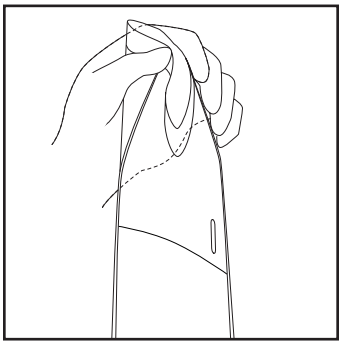
The HydraSleeve groundwater sampler can be used to collect a representative sample for most physical and chemical parameters without purging the well. It collects a whole water sample from a user-defined interval (typically within the well screen), without mixing fluid from other intervals. One or more HydraSleeves are placed within the screened interval of the monitoring well, and a period of time is allocated for the well to re-equilibrate. Hours to months later, the sealed HydraSleeve can be activated for sample collection. When activated, HydraSleeve collects a sample with no drawdown and minimal agitation or displacement of the water column. Once the sampler is full, the one-way reed valve collapses, preventing mixing of extraneous, non-representative fluid during recovery.

Assembly

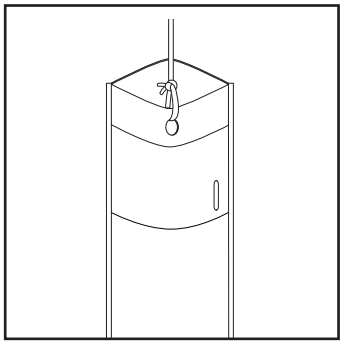
Assembling the HydraSleeve is simple, and can be done by one person in the field, taking only a minute or two.



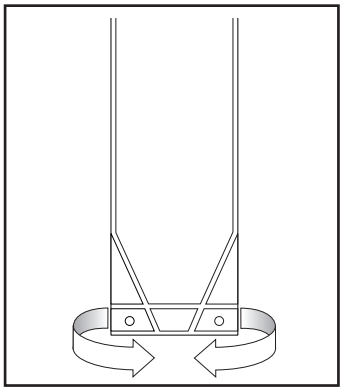
1 Remove HydraSleeve from package and grasp top to "pop" open.



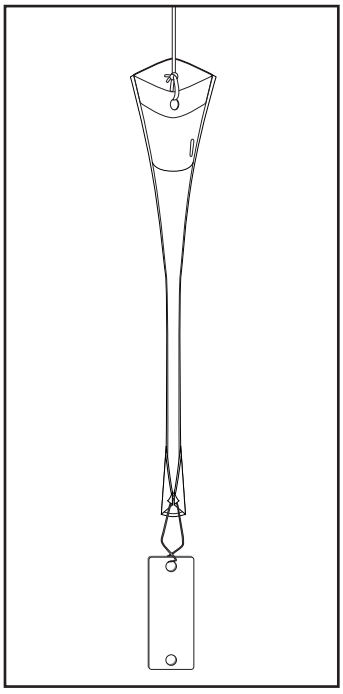
2 Squeeze side fins together at top to bend reinforcing strips outward.



3 Attach line to hole at top of HydraSleeve.



4 Fold the two holes at bottom of HydraSleeve together and attach weight



5 Sampler is ready to insert into the well.

Placing the HydraSleeve(s)

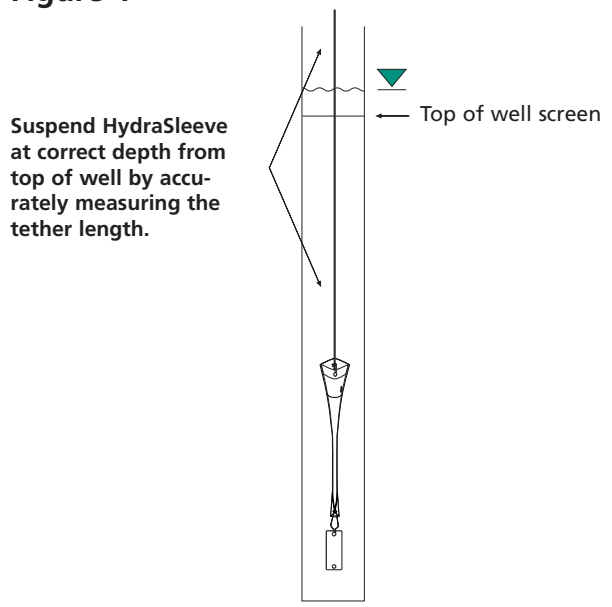
To collect a representative groundwater sample without purging, the well must be allowed time to re-equilibrate after placement of the sampler. When any device is lowered into a well, some mixing of the water column occurs. The diameter of the device and its shape greatly affect the degree of mixing. The flat cross-section of the empty HydraSleeve minimizes the disturbance to the water column as the sampler is lowered into position, reducing the time needed for the well to return to equilibrium.

There are three basic methods for holding a HydraSleeve in position as the well equilibrates.

TOP DOWN DEPLOYMENT (Figure 1)
Measure the correct amount of suspension line needed to "hang" the top of the HydraSleeve(s) at the desired sampling depth (in most cases, this will be at the bottom of the sampling zone). The upper end of the tether can be connected to the well cap to suspend the HydraSleeve at the correct depth until activated for sampling.

Note: For deep settings, it may be difficult to accurately measure long segments of suspension line in the field. Factory prepared, custom suspension line and attachment points can be provided.

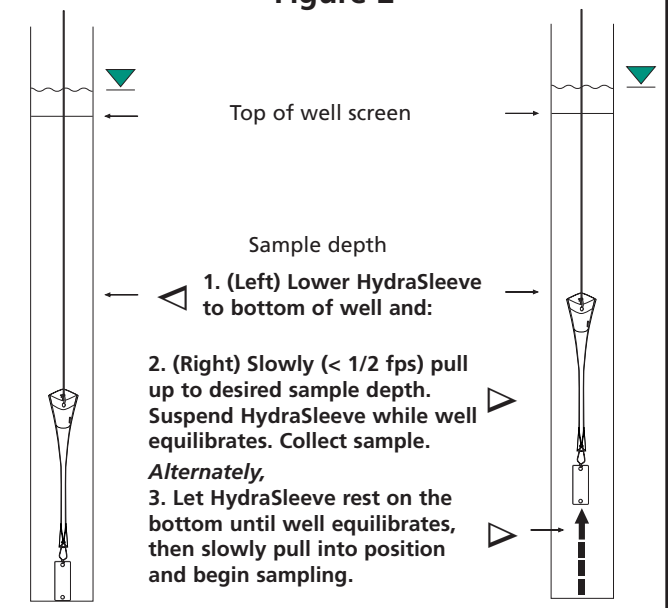
Figure 1



BOTTOM DEPLOYMENT (Figure 2)
Sound the well to determine the exact depth. Lower the weighted HydraSleeve into the well and let it touch the bottom. Very slowly (less than 1/2 foot per second) raise the sampler to the point where the check valve is at the depth the sample is to be collected. Attach the suspension line to the top of the well to suspend it at this depth. (It is often easier to measure a few feet from the bottom of the well up to the sample point, than it is to measure many feet from the top of the well down.)

Alternately, the sampler can be left on the bottom until the well re-equilibrates. For sampling, it can be very slowly pulled (< 1/2 fps) to sampling depth, then activated (see "Sample Collection," p. 6) to collect the sample, and retrieved to the surface.

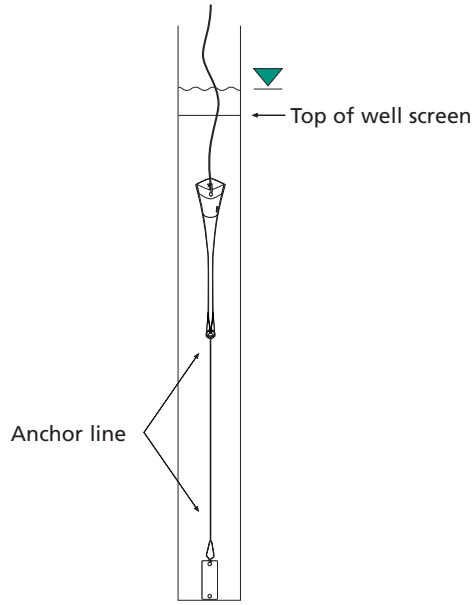
Figure 2



BOTTOM ANCHOR (Figure 3)

Determine the exact depth of the well. Calculate the distance from the bottom of the well to the desired sampling depth. Attach an appropriate length anchor line between the weight and the bottom of the sampler and lower the assembly until the weight rests on the bottom of the well, allowing the top of the sampler to float at the correct sampling depth.

Figure 3



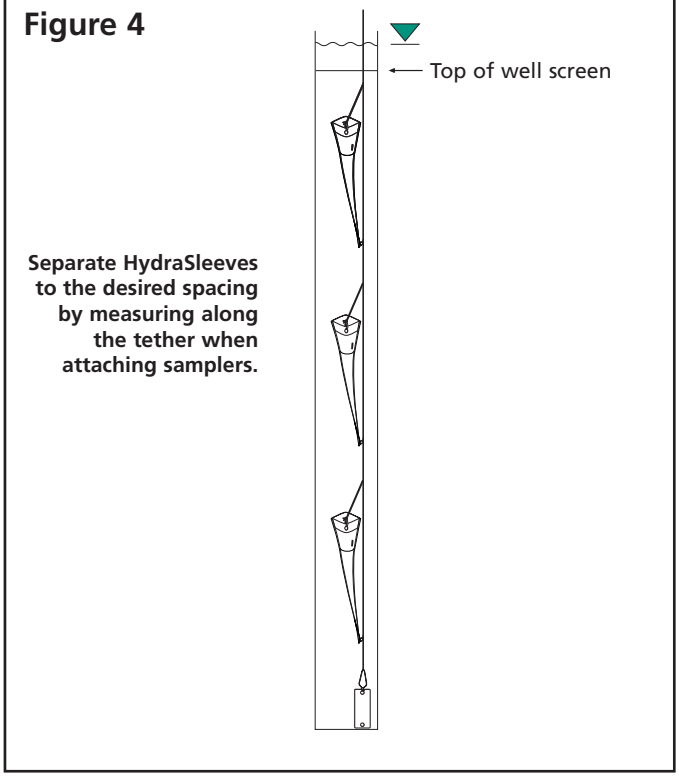
Multiple Interval Deployment

There are two basic methods for placing multiple HydraSleeves in a well to collect samples from different levels simultaneously.

ATTACHED TO A SINGLE TETHER (Figure 4)

To use 3 or more samplers simultaneously, we recommend attaching them all to a tether for support to prevent the sampling string from pulling apart. The weight is attached to a single length of suspension line and allowed to rest on the bottom of the well. The top and bottom of each HydraSleeve are attached to the tether at the desired sample intervals. Cable tie or stainless steel clips (supplied) work well for attaching the HydraSleeves to the line. Simply push one end of the clip between strands of the rope at the desired point before attaching the clip to the HydraSleeve.

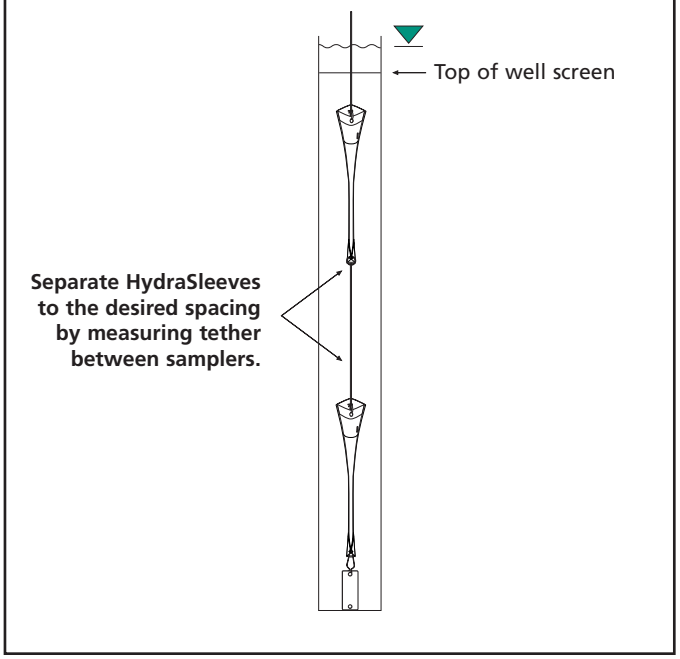
Figure 4



ATTACHED END TO END (Figure 5)

To place 2 or 3 stacked HydraSleeves for vertical profiling, use one of the methods described above to locate the bottom sampler. Attach the bottom of the top sampler to the top of the following HydraSleeve(s) with a carefully measured length of suspension cable. Connect the weight to the bottom sampler. Note: if many HydraSleeves are attached to a tether, more weight may be required than with a single sampler.

Figure 5



Sample Collection

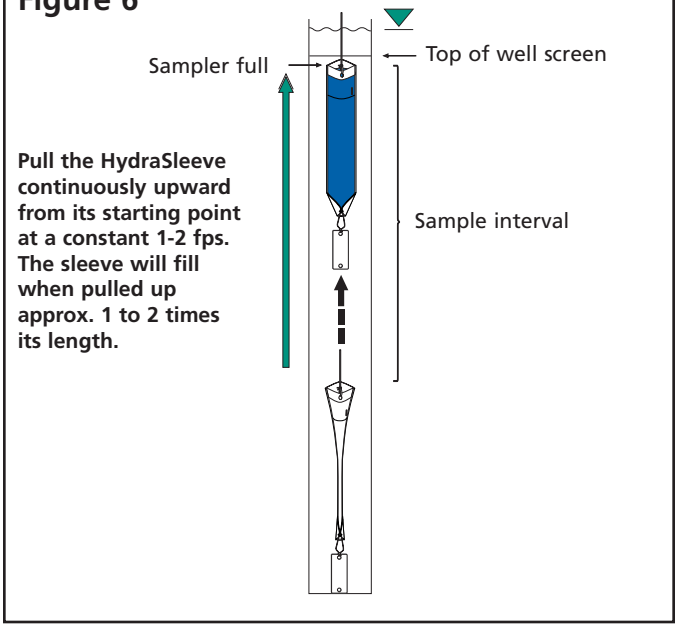
The HydraSleeve must move upward at a rate of one foot per second or faster (about the speed a bailer is usually pulled upward) for water to pass through the check valve into the sample sleeve. The total upward distance the check valve must travel to fill the sample sleeve is about 1 to 2 times the length of the sampler. For example, a 24-inch HydraSleeve needs a total upward movement of 24 to no more than 48 inches to fill. The upward motion can be accomplished using one long continuous pull, several short strokes, or any combination that moves the check valve the required distance in the open position. A special technique is used for sampling low-yield wells.

CONTINUOUS PULL (Figure 6)

Pull the HydraSleeve continuously upward from its starting point at a constant 1 to 2 feet per second until full. This method usually provides the least turbid samples and is analogous to coring the water column from the bottom up.

Note: When using this method, the screen interval should be long enough so the sampler fills before exiting the top of the screen.

Figure 6

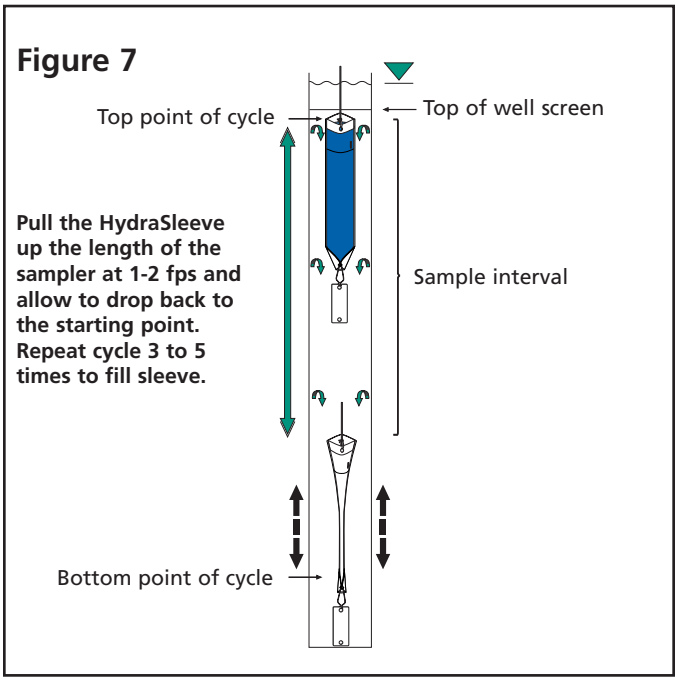


SHORT STROKES (Figure 7)

Pull the sampler upward at about 1 to 2 feet per second for the length of the sampler and let it drop back to the starting point. Repeat the cycle 3 to 5 times.

This method provides a shorter sampling interval than the continuous pull method (above), and usually reduces the turbidity levels of the sample below that of numerous rapid, short cycles (below). The sample comes from between the top of the cycle and the bottom of the sampler at its lowest point.

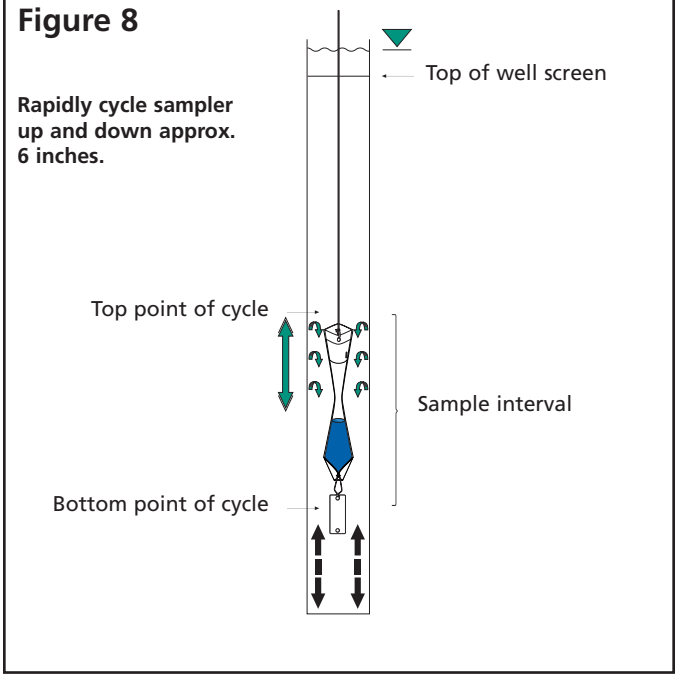
Figure 7



RAPID, SHORT CYCLES (Figure 8)

Cycle the HydraSleeve up and down using rapid, short strokes (6-inch cycle at a minimum of 1 cycle per second) 5 to 8 times. This method provides the shortest sampling interval. Dye studies have shown that when using this method the sample flows into the check valve from along the length of the sampler and immediately above the check valve. The sample interval is from the bottom the sampler at its lowest point in the cycle to the top of the check valve at the peak of the cycle.

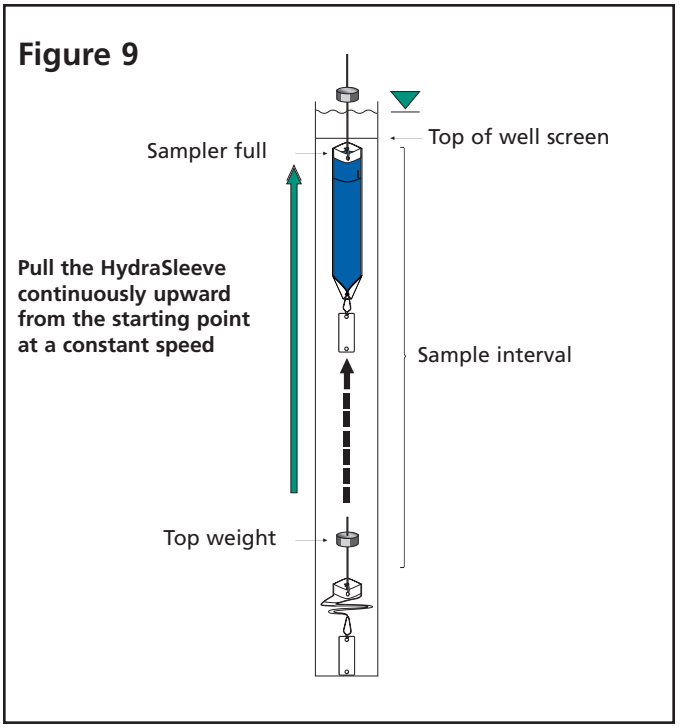
Figure 8



SAMPLING LOW-YIELD WELLS (Figure 9)

HydraSleeve provides the best available technology for sampling low yield wells. When pulled upward after the well re-equilibrates, the HydraSleeve will collect a water core from the top of the sampler to about its own length above that point. The sample is collected with no drawdown in the well and minimal sample agitation. An optional top weight can be attached to compress the sampler in the bottom of the well if needed for an extremely short water column. With a top weight, the check valve is pushed down to within a foot of the bottom of the well.

Figure 9



Sample Discharge

The best way to remove a sample from the HydraSleeve with the least amount of aeration and agitation is with the short plastic discharge tube (included).







First, squeeze the full sampler just below the top to expel water resting above the flexible check valve. (Photo 1, top left)

Then, push the pointed discharge tube through the outer polyethylene sleeve about 3-4 inches below the white reinforcing strips. (Photo 2, middle left)

Discharge the sample into the desired container. (Photo 3, bottom left)

Raising and lowering the bottom of the sampler or pinching the sample sleeve just below the discharge tube will control the flow of the sample. The sample sleeve can also be squeezed, forcing fluid up through the discharge tube, similar to squeezing a tube of toothpaste. With a little practice, and using a flat surface to set the sample containers on, HydraSleeve sampling becomes a one-person operation.

1680 Hickory Loop, Suite B • Las Cruces, NM 88005
Phone: 1.800.996.2225 • 1.505.523.5799 • Fax: 1.505.523.0789
www.geoinsightonline.com • KentCordry@aol.com

Assembly Instructions for NEW 1-inch Skinny HydraSleeve

1. Insert the top (open end) of the HydraSleeve into the female end of the PVC Collar and pull it through.



2. Insert the male threads of the top portion of the PVC Collar into the HydraSleeve. Do not insert the threads past the weld line in the HydraSleeve. NOTE some of the male threads will remain exposed, they will not be threaded entirely into the female portion.



3. GENTLY thread the two portions of the collar together with the HydraSleeve in place between the threads. It only takes a turn or two to hold it in place, DO NOT FORCE THE THREADS.



4. Attach a clip to the holes in the top portion of the PVC Collar as seen here.



5. Insert another clip into the hole at the bottom of the HydraSleeve, under the knot. Then attach an 8-ounce bullet weight to the bottom clip.



When resting on the bottom of the well, the collection cycle will begin ~54 inches off the bottom. It will fill within a 10-foot saturated screen using a single pull stroke. For screens that are less than 10-feet, the unit can be oscillated up and down to allow it to fill. The NEW 1-inch SkinnySleeve holds 300 mls.

THIS SIZE SKINNYSLEEVE FITS IN 1-INCH SCHEDULE 40 WELLS

HYDRASleeve™

Simple by Design

US Patents No. 6,481,300; 6,837,120; others pending

SuperSleeve Assembly Instructions

Introduction

The most common practical limitation for no-purge sampling is sample volume. The HydraSleeve SuperSleeve was designed for maximum fill rate and maximum volume to address this issue. The HydraSleeve SS consists of a special 2-piece top weight, a slightly wider sleeve with a wider check valve.

Please use these assembly instructions in conjunction with the standard HydraSleeve Field Manual.



GeoInsight

(800) 996-2225 • www.hydrasleeve.com • www.nopurgesampling.com
P.O. Box 1266 • Mesilla Park, NM 88047

Assembly

Attach the Bottom Weight
Fold bottom of sleeve in half vertically to align holes. Open prongs of bottom weight clip by squeezing. Insert reusable weight clip through holes and attach the bottom weight.





Attaching the Sleeve to the Top Weight
Insert the open (check valve) end of the HydraSleeve SS through the bottom of the stainless steel portion of top weight until about 1/2 inch of the open sleeve protrudes above the female threads.



Thread stainless steel weight (female thread) onto PVC top piece (male thread) locking the top of the HydraSleeve SS between the threads.







Assembled

Assembled 1-liter HydraSleeve SS



2-Inch HydraSleeve SS Sizes

- 1-liter HydraSleeve SS 3-feet in length
- 2-Liter HydraSleeve SS 5-feet in length



Allow Weight to Settle

1. Lower the HydraSleeve SS into the well until the bottom weight touches the bottom.

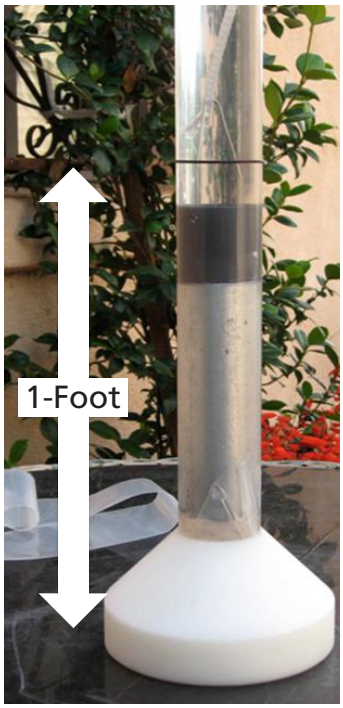
2. Depending on the length of the HydraSleeve, provide enough slack tether to allow the top weight to fully compress the sampler into the bottom of the well.
Example – At least an additional 3 feet of tether for a 1-liter (36-inches long) HydraSleeve SS.



Compression and Fill Rates

1-liter HydraSleeve SS (3-feet long) will compress to within 1 foot of bottom of 2-inch well screen in about 2 hours.
1-liter HydraSleeve SS requires about 3 feet of water over the top of the sampler to completely fill.

2-liter HydraSleeve SS (5-feet long) will compress to within 2 feet of bottom of 2-inch well screen in about 4 hours.
2-liter HydraSleeve SS requires about 5 feet of water over the top of the sampler to completely fill.



APPENDIX E

LOW-FLOW GROUND WATER SAMPLING FORMS

TRC

Low-flow Groundwater Field Data Record

Project:	**Project No.:**	**Date/Time:**	**Sheet ___ of ___**
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- **Temperature: +/- 3 %**
- **Conduct. (µmhos/cm): +/- 3 %**
- **DO (mg/l): +/- 10 % (for values >0.5 mg/L)**
- **pH (Std. Units): +/- 0.1 SU**
- **Eh/ORP (millivolts): +/- 10 mV**
- **Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)**
- **Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)**

Pump Type	**Purge**	**Sample**
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

Analytical Parameter	**Filtered (Y/N)**	**Preservation**	**Volume**	**Time Collected**	**QC**	**Sample #**
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

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- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

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TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☐	☐
Concrete Collar Intact	☐	☐
PVC Stick-up Intact	☐	☐
Well Cap Present	☐	☐
Security Lock Present	☐	☐

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

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- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other:_____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☐	☐
Concrete Collar Intact	☐	☐
PVC Stick-up Intact	☐	☐
Well Cap Present	☐	☐
Security Lock Present	☐	☐

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other:_____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
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PAH	N	Ice	1000			H4-MW1

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TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☐	☐
Concrete Collar Intact	☐	☐
PVC Stick-up Intact	☐	☐
Well Cap Present	☐	☐
Security Lock Present	☐	☐

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- Temperature: +/- 3 %
- Conduct. (µmhos/cm): +/- 3 %
- DO (mg/l): +/- 10 % (for values >0.5 mg/L)
- pH (Std. Units): +/- 0.1 SU
- Eh/ORP (millivolts): +/- 10 mV
- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
- Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)

Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other:_____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- Temperature: +/- 3 %
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- pH (Std. Units): +/- 0.1 SU
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- Turbidity (NTU): +/- 10 % (for values >5.0 NTUs)
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Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

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Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

LNAPL/DNAPL Depth = _____

Thickness =

LOW FLOW DATA

Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

Adjusted purge Rates/time/WL(record changes)

Flow rate at time of sampling:

Volume of water purged:

FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
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Pump Type	Purge	Sample
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Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

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Signed: _____

TRC

Low-flow Groundwater Field Data Record

Project:	**Project No.:**	**Date/Time:**	**Sheet ___ of ___**
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure		
Concrete Collar Intact		
PVC Stick-up Intact		
Well Cap Present		
Security Lock Present		

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

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WELL MATERIAL

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LNAPL/DNAPL Depth = _____

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Depth of pump intake:

Static water level after pump put into well

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Adjusted purge Rates/time/WL(record changes)

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Volume of water purged:

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Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
Depth To Water (ft)										

Time							
Temp. (C)							
Conduct. (µmhos/cm)							
DO (mg/l)							
pH (Std. Units)							
Eh/ORP (millivolts)							
Turbidity (NTU)							
Flow (ml/min)							
Depth To Water (ft)							

Stabilization Criteria* **(3 consecutive readings)**

- **Temperature: +/- 3 %**
- **Conduct. (µmhos/cm): +/- 3 %**
- **DO (mg/l): +/- 10 % (for values >0.5 mg/L)**
- **pH (Std. Units): +/- 0.1 SU**
- **Eh/ORP (millivolts): +/- 10 mV**
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- **Drawdown: < 0.3 ft (can be greater as long as water level stabilizes above well screen)**

Pump Type	**Purge**	**Sample**
Peristaltic Pump	☑	☑
Submersible Pump	☐	☐
Bladder Pump	☐	☐
Other: _____	☐	☐

Comments:

Analytical Parameter	**Filtered (Y/N)**	**Preservation**	**Volume**	**Time Collected**	**QC**	**Sample #**
ETPH	N	Ice	1000			H4-MW1
PAH	N	Ice	1000			H4-MW1

*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

Rev: October 2012

TRC

Low-flow Groundwater Field Data Record

Project:	Project No.:	Date/Time:	Sheet ___ of ___
South Meadows	105333.9130.0000		

TRC Personnel:

Well ID: H4-MW1

WELL INTEGRITY

	YES	NO
Protect. Casing Secure	☐	☐
Concrete Collar Intact	☐	☐
PVC Stick-up Intact	☐	☐
Well Cap Present	☐	☐
Security Lock Present	☐	☐

Sampling Equipment:

Flow-thru Cell Volume:

PID SCREENING MEAS.

Background	
Well Mouth	

Protective Casing Stick-up (from ground) N/A ft.

Riser Stick-up (from ground) N/A ft.

WELL DIAMETER ☑ 2 inch ☐ 4 inch ☐ 6 inch

Other: _____

WELL MATERIAL

☑ PVC ☐ SS ☐ ___

Well Depth 28.69 ft. ☐ top of riser ☐ top of casing ☐ _____ ☐ measured ☑ historical

Water Depth _____ ft.

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Depth of pump intake:

Static water level after pump put into well

Initial purge Rate/ Water Level (100-400 ml/min):

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Flow rate at time of sampling:

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FIELD WATER QUALITY MEASUREMENTS (record at appropriate intervals)

Time										
Temp. (C)										
Conduct. (µmhos/cm)										
DO (mg/l)										
pH (Std. Units)										
Eh/ORP (millivolts)										
Turbidity (NTU)										
Flow (ml/min)										
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Pump Type	Purge	Sample
Peristaltic Pump	☑	☑
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Other:_____	☐	☐

Comments:

Analytical Parameter	Filtered (Y/N)	Preservation	Volume	Time Collected	QC	Sample #
ETPH	N	Ice	1000			H4-MW1
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*** From USEPA Region 1 Low-Stress (Low-Flow) SOP, January 19, 2010 (EQASOP-GW-001).**

Signed: _____

Attachment 4

SECURITY & SAFETY OVERVIEW & OPERATING PLAN AT MIRA DISSOLUTION AUTHORITY SOUTH MEADOWS FACILITIES

South Meadows Facilities & Property Description

The MIRA South Meadows Facility property is located at Gate 20 Reserve Road and 300 Maxim Road in Hartford, Connecticut. The property consists of approximately 80 acres of land which is zoned for industrial/commercial usage. Approximately two-thirds of the property (the northern portion) is known as the Power Block Facility (PBF) at which there is a shuttered electrical generating station, while the remaining one-third of the property (the southern portion along Maxim Road) is known as the Waste Processing Facility (WPF), which formerly processed municipal solid waste into refuse-derived fuel for combustion.

PBF

The PBF is occupied by multiple structures, including: a small guard building adjacent to the Gate 20 driveway entrance; the administrative building; PBF main building which includes substructures added onto over the course of the history of the plant (the turbine hall, the boiler area, the electrical area, the cable vault, the former Northeast Utilities (NU) – n/k/a "Eversource" offices, the control room); the ash load-out building; the PBF warehouse; the jet shop; the jet fuel pump house; the coal pond pump house; several screen houses; the conveyor transfer building; and a warehouse storage building ("the dozer garage") in the far southwestern portion of the property.

Two active electrical substations (one 23 kV and one 115 kV) are located in the central portion of the PBF. The substations are located within an easement area that has been granted to Eversource by the MIRA Dissolution Authority. Eversource owns and operates all of the equipment within the substations, except for two station service transformers and two step-up transformers that served the PBF when it was operational

In addition, there are four jet turbine "twin-pacs" located to the south/southwest of the main PBF building which formerly operated as "peaker" units, providing electricity to the regional grid for stability. Jet fuel to power the turbines was formerly stored in a newly-constructed (2011) 550,000-gallon welded steel aboveground storage tank (AST) which is located to the west of the jet turbines. The jet turbine twin pacs and the fuel tank are scheduled for removal under a current Agreement with S&S recycling along with spare parts in the jet shop and PBF warehouses.

WPF

The WPF is occupied by two buildings. The first is an approximately 202,000 square foot building which houses the administrative offices, the processing equipment, the Maneuvering Hall and the refused derived fuel (RDF) storage area. An approximately 38,000 square foot storage building is located to the north of the administrative offices at the WPF. Other notable features at the WPF include the two truck scales and scale house located to the south of the WPF building. There are two other truck scales, one located just prior to Gate 50 and one to the west of the RDF building with egress to Gate 40.

Municipal solid waste was formerly accepted into the WPF building for sorting and processing in preparation for conveyance to the PBF portion of the property where it was burned in three large municipal waste combustors/boilers to generate electricity. The waste was transferred between the two facilities by an approximately 1,000 foot long, enclosed conveyor that runs south to north between the RDF storage building and the main PBF building.

SECURITY AND SECURITY PATROL SERVICES

Fencing, Access and Security Cameras

The primary operational areas of the property (everything to the south of the Charter Oak Bridge) are secured by a combination of chain-link fencing around the northern, southern and western extents, and the flood control dike to the east. Additional security fencing is present between the WPF and PBF portions of the property, as well as around sensitive operational areas such as the switchyards and jet turbine yard.

Secured entrances exist along Reserve and Maxim Roads. The main entrance at Gate 70 on Maxim Road is controlled by electronic FOB issued by Sonitrol. Gates 50 and 60 on Maxim Road have padlocks with the code [redacted] as well as Gate 20 which serves as the entrance to 100 Reserve Road (PBF). Inner Gates that separate the WPF and PBF are opened on the WPF side with the codes [redacted] (CT River berm side) and [redacted] leading from RDF Building to the 4th scale). Note that Gate 40, located along Reserve Road, is owned, operated and maintained by Eversource; however, the Authority holds an access easement through Gate 40. Badges to open Gate 40 must be obtained from Eversource.

Currently, MIRA has cameras at the following locations:

[redacted]

Security Guard Patrols

The MIRA Dissolution Authority (MIRA DA) utilizes a security company which patrols the South Meadows facilities at 100 Reserve Road (decommissioned Power Block and Jet Turbine Facilities) and 300 Maxim Road (decommissioned Waste Processing Facility) including MIRA Headquarters and ancillary buildings and warehouses [redacted]

MIRA is utilizing the State of Connecticut Department of Administrative Services (DAS) Contract for Security Personnel Services, DAS Contract No. 17PSX0001 (State Contract), with United Security Inc. (USI). USI provides trained security personnel to be on-site during the aforementioned time periods to surveil the facilities and grounds throughout the premises to guard against unauthorized trespassers and intruders. USI personnel patrol a route determined by MIRA DA staff two times every hour during each shift. Post orders instructing USI security personnel of all shift duties will be attached to this file.

MIRA DA's Headquarters building and adjacent warehouse have comprehensive access control and alarm systems through Sonitrol/Alarm New England. The Jets shop building's alarm system is with ADT. [redacted] In addition, MIRA DA personnel check on these facilities routinely during normal working hours Monday through Friday. MIRA DA staff are notified via phone calls and text messages if any alarms are activated.

Issues and Concerns

Illegal dumping

Illegal dumping has occurred on MIRA DA's properties in the South Meadows. Illegal dumping of used tires and other bulky items has been a common occurrence on our property at 100 Reserve Road under the Charter Oak Bridge. MIRA DA staff successfully worked with the City of Hartford to get the tires and other bulky waste items removed. Additional perimeter fencing was installed at the entrance of 100 Reserve Road cutting off access to the area under the Charter Oak Bridge. The Hartford Police Department has been called when illegal dumping has occurred and is well aware of the problem that is widespread throughout the City. United Security personnel have stopped people from illegally dumping material on the Charter Oak Bridge side.

Intruder Access to Abandoned Buildings

The prime concern is preventing access to the interior of the decommissioned power block facility (PBF) and waste processing facility (WPF) and ancillary buildings for the purpose of theft or shelter. The PBF in particular, can be dangerous for anyone unfamiliar in navigating through the plant.

Gate 20 off of Reserve Road is the main entrance to the power block facility. Gate 20 has been de-energized and padlocked. Note that there are two padlocks on Gate 20 – one belonging to MIRA DA, and one belonging to the City of Hartford Public Works Department – Engineering Division to allow 24-hour access to the flood control dike that runs along the eastern property line. Gate 40 off of Reserve Road is owned, operated and maintained by Eversource. That gate is only accessible via card key and serves as the main entrance used by Eversource to access their equipment storage yard on the corner of Reserve and Maxim Roads (parcel owned by Eversource), as well as their switchyards and other facilities on the South Meadows property. All other interior gates to access the PBF from the waste processing facility are electronically controlled with numerical code access as noted earlier in this document.

Secured Doors at WPF and PBF

MIRA DA's Director of Enforcement and its Environmental Compliance Manager have identified and numbered 80 access doors that need to be secured and recommended actions to secure them at both the WPF and PBF and their ancillary buildings. Tull Bros. of Rocky Hill performed the work necessary to secure all doors to prevent intruder access.

Many of the doors were repaired and new dead bolt locks were added. Doors that were no longer needed for ingress and egress were welded shut. Glass doors had wire mesh installed to prevent breaches and doors with windows had the glass covered with metal.

Fire Control Systems & Fire Department Access to MIRA DA's South Meadows Properties

MIRA DA's Headquarters and WPF warehouse are all equipped with sprinkler systems that are heat activated. The Jet Shop is equipped with heat sensors connected to a fire panel monitored by ADT but does not have a sprinkler system.

The water supply to fire sprinkler zones at the unoccupied (and unheated) waste processing facility building was shut down and the alarms in those zones were disabled to prevent false alarms to HFD. Similarly, the sprinkler system that protected the PBF control room, cable spreading room and maintenance shop have all been disabled in accordance with the HFD Fire Marshal's instructions.

MIRA DA staff worked closely with the Hartford Fire Department (HFD) installing Knox Boxes at main entry points to the decommissioned power block and waste processing facilities as well as the Headquarters. HFD retains the keys to the Knox boxes which hold passwords and keys to open gates in case of fire.

MIRA Security Post Orders

Effective Date: February 14, 2025

V0.7 20240501

Purpose: The goal is to maintain a secure facility and grounds and prohibit unauthorized people from entering the property. The security officer will conduct vehicle patrol check responsibilities on the MIRA property.

Contacts

For any building or grounds issues (broken door, gate issues, facility vehicles, lights out, etc.) that arise, security is to contact the USI Field Operations Supervisor via phone. If it is an emergency that requires a response from police, fire or ambulance, and they do not answer their phone, please leave a detailed voice message, and then contact the MIRA Director Tom Gaffey to let him know of the situation or issue. Also, inform your security team's field supervisor of the situation.

Local Contacts:

Tom Gaffey MIRA Director of Recycling and Enforcement	[redacted]
Chris Shepard MIRA Environmental Compliance Manager	[redacted]
Al Jerome MIRA Lead Enforcement	[redacted]
Hartford Police Non-Emergency Line	(860) 757 - 4000
Hartford Fire Non-Emergency Line	(860) 757 - 4500
USI Security Officer Dedicated Site phone	[redacted]

Position Summary

Security Professionals assigned to the MIRA facility will maintain a helpful, courteous attitude and project a favorable first impression to MIRA representatives and personnel. Performing security duties requires personnel to exercise sound judgment and common sense consistently. Everyone must be treated with the utmost courtesy and respect, even if their actions seem to warrant otherwise. All situations will be managed in a manner that will cause the least possible disturbance to others.

As a Security Professional, you represent an easily distinguishable figure of authority and act to deter crime. Seldom are such acts perpetrated in the presence or proximity of Security.

At the MIRA facility offices, you may have exposure and contact with visitors as well as local and state officials. Therefore, your conduct, bearing, and appearance must be exemplary in all dealings with MIRA personnel and visitors. This will ensure a favorable reaction from employees and generate an excellent working atmosphere for security and MIRA personnel.

Security Officers are responsible for patrolling, preventing, and detecting pilferage and theft, limiting access control to facilities from trespassing intruders, maintaining personal and public safety and order, and preparing reports as requested.

Responsibilities/Essential Functions

- Serve as first responders to any situation that arises. Police to assist if needed.
- Comply with all policies and procedures as required
- Patrol client sites, as directed, to prevent threats and deter serious incidents.
- Restrict access to the facility to authorized personnel only.
- Become familiar with the client's entries, exits, and emergency plan(s)
- Evaluate and detect emergency situations
- Become familiar with emergency procedures in the event of medical or physical emergencies, such as accidents, fires, explosions, strike/picket actions, evacuations, etc.
- Act as a liaison to clients regarding building security issues
- Perform other duties and responsibilities as may be required
- USI's Security Personnel shall fill out the mileage sheet in the vehicle at the beginning and end of each shift, noting the beginning and end mileage. Additionally, the officer MUST complete a vehicle inspection form once per shift.
- The key to the MIRA vehicle that is utilized by USI's security personnel shall be kept in the locked guard house at the conclusion of each shift.
- USI is responsible for cleaning the guard house and maintaining cleanliness.
- USI will be responsible for fueling up the vehicle. Once fueled, a picture of the receipt shall be sent to the USI Field Operations supervisor who will forward to the client.

- Ensure security lights are activated during all vehicle patrols. Lights must be turned off when offsite to fuel up the vehicle at the gas station less than a half mile away located on Brainard Road. Fueling up the vehicle is the sole permitted reason for driving it off-site with the exception of the outer perimeter of the MIRA facilities on Maxim Road and Reserve Road.

The opening security officer should tour the entire facility to ensure that staff and clients have a safe environment. Some items that should be inspected each morning as well as monitored throughout the day are:

- Obstructed access points
- Weather hazards (ice, snow, high wind)
- Broken lights
- Fire alarm and safety hazards
- Smell of gas or smoke
- While monitoring parking lots during the day, keep an eye out for the following.
    - That no one is parking in the "No Parking" fire lane
    - Only those with issued Handicap Parking tags are parking in handicapped spots
    - Keep an eye on vehicles to make sure no damage or theft occurs
    - Report any breaks or damage to the perimeter fencing that begins to develop on the property
    - Report damages to parking lot gates, lights, signs, and other properties.

Any unsafe conditions should be reported to your USI Operations Supervisor immediately who will contact the MIRA contacts to help prevent costly damage to the building and interruption to the normal way of business. All security officers must remain alert to such conditions.

General Policies

- Security Officers must arrive in full uniform for assigned shifts daily.
- Once the gate opens, the Security Officer will enter and only pull up enough for their vehicle to clear. It is essential that the officer does not allow any vehicle behind them to follow them through the gate.
- Security Officers, upon arrival, must clock in using TeamTime.
- Security Officers must report absences, tardiness, or emergencies to USI Management.
- Security Officers must make entries on the Daily Activity Report on an hourly basis.
- Security officers should report abnormal conditions immediately to the USI Operations Supervisor who will contact the MIRA contacts. i.e., ice/snow, power outages, etc.
- Security Officers will report any illegal dumping on or close to the site to the Hartford Police Department's non-emergency number – 860-757-4000
- No eating while in patrol vehicles. Food or drinks are prohibited from being in any vehicle, with the exception of water. Meal breaks should be taken in the guard house.
- No reading of books, or newspapers, listening to music, using earbuds, working on paperwork not directly related to the duty post, or using cell phones not directly related to the duty post. Acceptable use of cell phone is limited to corresponding with your supervisor or MIRA personnel.
- Security Officers should take directions from USI Operations Supervisor or MIRA. Any deviation from the post orders needs to be approved by the client or USI Management.
- Fraternization with MIRA employees is prohibited.
- The assigned vehicle is monitored by a GPS/Geotab system and any speeding or unsafe driving will be automatically be sent to USI management for review.
- There will be a 2nd vehicle available (Gold Pickup) that shall only be used if the primary vehicle is not able to be driven. If the 2nd vehicle needs to be utilized, you must notify the Field Operations Supervisor immediately. The keys of this vehicle are located in the guard house desk drawer in a marked envelope.
- The padlock code for Gates 20 and 60 is [redacted] If this gate needs to be opened for any reason, please ensure the combination lock is "married" to the padlock with the key when secured

Security Systems

Currently, MIRA has cameras at the following locations:

[redacted]

Daily Surveillance Procedures

Each Security Officer must follow this procedure upon arrival at the site.

Entering and Exiting

All USI officers that are assigned to MIRA will be issued a key fob from a Field Operations Supervisor. This key fob will allow them access from the gate near the cul de sac at 300 Maxim Road. (Gate #20 near bridge off of Reserve Rd can no longer be utilized for entry/exit). After scanning the key fob, the gate will open and the officer shall pull through and remain in the area to ensure the exterior gate closes behind them. It is essential that the officer does not allow any vehicle behind them to follow them through the gate. Once the gate secures itself, the officer shall proceed straight. The next gate can be accessed using code [redacted] (the only other remaining interior gate is code [redacted]

When exiting, all gates will automatically open when pulling up to them while inside the vehicle. When exiting the site, please ensure the exterior gate closes securely before departing the area.

Upon Arrival

USI security personnel shall use the guard house located at the entrance to the PBF to report to work each day. Security personnel shall access the guard house [redacted]

The security officer assigned to this detail on the overnight shift [redacted] will be calling in to the Command Center on [redacted] to check in. Please make sure that an entry is made on your Daily Activity Report log of these calls along with any relevant notations. On the first call, please give the

Command Center's Operator your personal cell phone number as they will call the officer if they do not check in hourly.

Property Surveillance Tour Schedule

The current post plan for MIRA is Monday through Friday [redacted] and Saturdays/Sundays [redacted] These shifts will be split up as needed by USI management to ensure proper coverage.

At the start of each officer's shift, the assigned officer shall conduct a full tour to include checking all designated doors, gates and padlocks while touching each tour point with the assigned MIRA cell phone. There are currently [redacted] tour points. At the end of each officer's assigned shift, they shall complete another full tour to include checking all designated doors, gates and padlocks while touching each tour point with the assigned MIRA cell phone. If any area/tour point cannot be accessed due to the weather etc, it shall be noted in the cell phone tour system and noted on the officer's Daily Activity Report with the reason why (DAR).

Between the beginning opening tour and the final closing tour, the assigned officer shall conduct continuous vehicle patrol tours following the designated patrol routes. During these tours, the officer shall look for any signs of trespassers and visually look at all designated doors, gates and padlocks from the vehicle. The only exception to constant vehicle patrol tours would be the officer's lunch break (30 minutes), bathroom breaks, or other approved reasons (ie. Completing incident reports, timesheets, dealing with a trespasser or incident or phone calls with USI management).

The security officer will not keep the vehicle running in the idle position if a tour is not being performed. The security officers will use the vehicle provided by MIRA to conduct the surveillance tours.

Exhibit A presents a drawing of the property with the surveillance travel route highlighted in yellow.

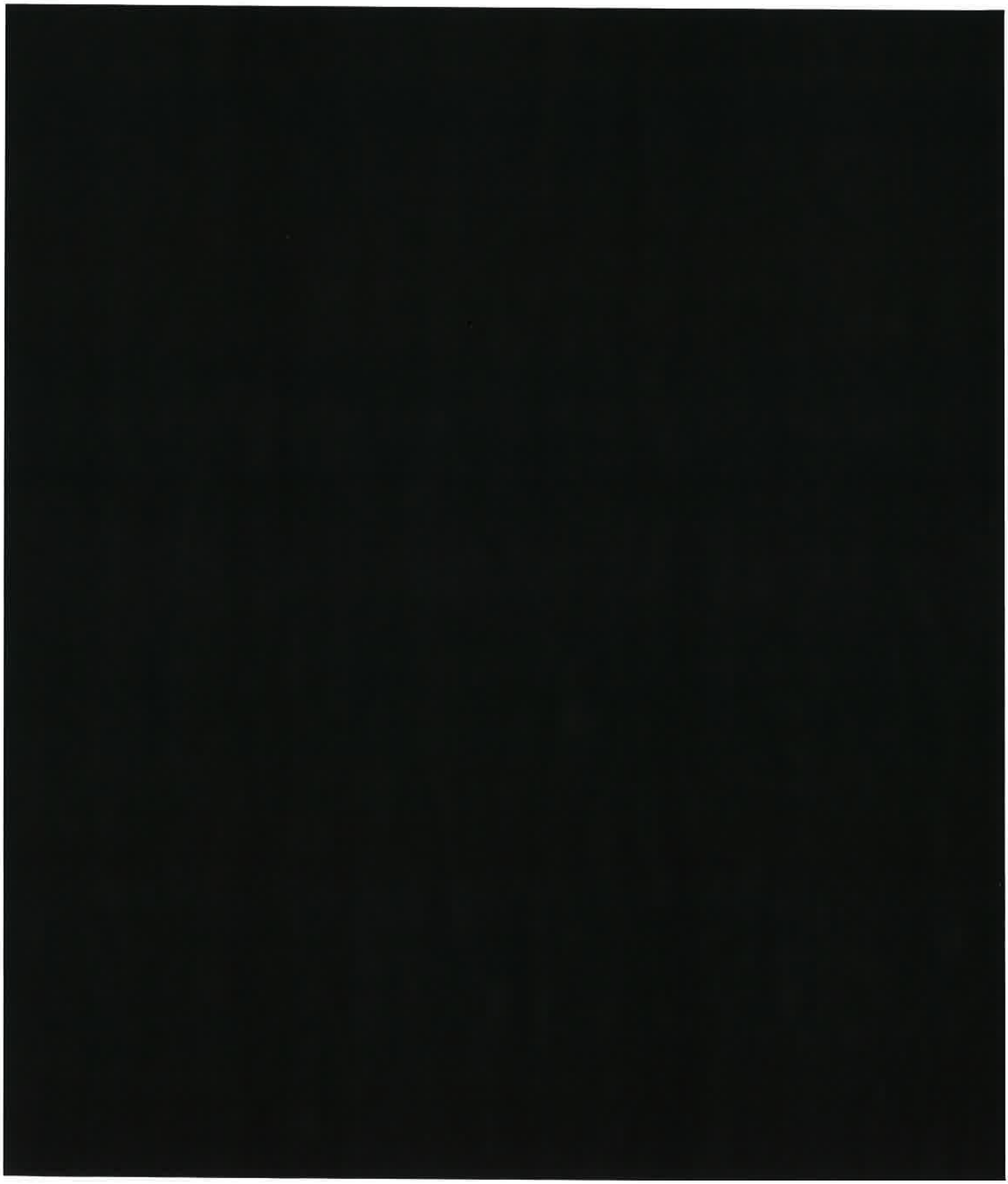
The Security Officer is to take a **different** surveillance route each time they undertake a surveillance tour, ensuring they cover the highlighted roadways shown in **Exhibit A**.

The security officer will document in a logbook the start time and end time of each surveillance tour. The logbook shall be kept in either the vehicle or the guard shack.

The code to access the west intra-facility gate is [redacted] The code to access the east intra-facility gate (near river) is [redacted]

Please refer to the map on Page #7

MIRA Security Post Orders



USI's Continuing Responsibility

Operational failure of the USI's equipment, labor strikes affecting the USI's performance of the Services, or any other cause will not release the USI of its responsibility during the term of the DAS Contract on a continual basis. All costs involved in complying with this requirement shall be the USI's responsibility.

MIRA Access

As property owner MIRA has the right to visit the property at any time for any purpose.

Incident Reporting

If an incident appears on the Serious Incident Reporting List below, an incident report should be completed and sent to USI Management. Notification to USI management as well as MIRA contacts.

SERIOUS INCIDENT REPORTING (S.I.R) LIST

- Any injury to company personnel.
- Any injury to an individual involving a company employee.
- Any motor vehicle accident involving an USI or client-owned vehicle (also requires on site personnel to remain on site until arrival/investigation of USI Manager).
- Felony crime report (assault, robbery, murder, rape, burglary). Any detainment of a person by USI staff.
- Any arrests made by public law enforcement.
- Theft from a client facility with potential value over $250.00
- Any allegation of theft against company employee.
- Fire or explosion at client facility.
- Incidents involving alleged wrongdoing by company employees (theft, assault, harassment, use or possession of drugs or alcohol, negligence, sleeping, etc.).
- Natural or man-made serious damage to client's facility (floods, vandalism, storm damage, etc.).
- Confrontation with any client representative, visitor, resident, guest, or senior management of any significant nature.
- Arrest of any employee, on or off duty.

- Report of negligence or inappropriate response to any incident or situation. 16. Report of excessive use of force.
- Any event that requires or results in Emergency Services being called to client facility (PD, FD, EMS).
- Any lost keys at a facility (in the event of Master Keys, no personnel to leave site and USI Management response required).
- Any calls to, or visits by, media or press to a client facility.
- Bomb Threat.
- Any terrorist act or threat of terrorism.

Road Safety

USI is solely responsible for any violations of any State of Connecticut or municipal traffic laws or regulations, including, without limitation, violations due to the USI's failure to provide adequate insurance and safety equipment, to such vehicles and equipment.

Other Activities

USI shall not conduct or allow others to conduct, any activity at the MIRA properties not specifically approved and authorized by MIRA in writing.

USI shall not use MIRA's property and/or structures for any other activity unrelated to USI's obligations to perform the Services under the State Contract.

Read and Sign

By signing I acknowledge that Post Orders for the MIRA facility has been discussed and reviewed with me by the USI & MIRA Management. I have read and understand the orders.

Officer:	Date:

Attachment 5

South Meadows Structural Operating Plan

South Meadows Structural Operating Plan

5/1/2025

Summary

The structural operating plan for the South Meadows facility involves a comprehensive assessment and inspection program for on-site structures to ensure their integrity. After an initial evaluation by Authority staff, it was determined that the structures on the Waste Processing ("WPF") side of the site were sound and do not require structural evaluation, with all structures constructed in the 1980's or later. Therefore, the comprehensive assessment focused on the Power Block ("PBF") side of the site, with some structures dating back to the 1920's and some newer structures showing signs of corrosion due to the nature of the PBF processes when it was operating.

The Authority engaged HDR, Inc. to conduct a thorough examination of the steel framework and masonry structures of the PBF to identify any signs of corrosion, cracks, or deterioration. Of particular importance is an assessment of the boiler hangers, as the three waste-to-energy boilers are supported from the roof of the PBF. Non-destructive testing methods like ultrasound and magnetic particle testing may be employed for a detailed analysis following visual inspection if observations indicate such testing would provide value.

At the conclusion of the thorough examination, a baseline condition assessment and inventory of key structural elements will be developed and an inspection program will be implemented to routinely assess the condition of key structural elements vs. baseline conditions. Structural conditions deemed unsafe will be managed through various practices including: Barricading areas deemed unsafe to prevent access, prioritizing maintenance and/or demolition activities, rust removal, reinforcement of weakened sections, and repointing of masonry joints. Regular monitoring and periodic inspections would be scheduled to detect any new issues promptly, ensuring the continued stability and functionality of the facility.

As of early April, 2025, HDR is working to incorporate its final observations into a technical memo, inspection form, and associated support documents. Each of these documents (with the exception of the photo log) is in draft form and attached hereto.

Technical Memo

Date: Wednesday, April 30, 2025

Project Mira Dissolution Authority (MDA) Structural Evaluation

To: Dave Bodendorf (MDA)

From: Jesse Jaeckel (HDR); Dallas Dissmore (HDR)

Subject: Structural Evaluation Technical Memorandum

Project Understanding

On July 19, 2022, MIRA ceased municipal solid waste combustion and associated electricity production at its Connecticut Solid Waste Systems Resource Recovery Facility ("CSWS RRF", or the "Facility"). MIRA has since rebranded to the MIRA Dissolution Authority ("MDA"). Since its closure the Facility has been broom swept, but limited decommissioning activities have otherwise occurred. Waste handling and processing equipment has not been operated, and areas of the buildings have continued to deteriorate. Roof leaks and sections of insulated, modular wall panels were observed to be missing from the Power Block Facility ("PBF"), allowing precipitation to enter the building and accelerate the degradation of the interior equipment and structures.

The MDA recently completed the South Meadows Redevelopment Considerations Study to inform stakeholders of the environmental needs and knowledge required for redevelopment of the site. MDA identified the importance of evaluating the current structural condition of the PBF, identifying critical structural components of the facility, and developing a routine inspection program where the condition of the facility can be monitored against the baseline condition until which time the site is redeveloped or demolition activities occur.

To complete this evaluation MDA retained HDR Engineering, Inc. to visually observe and report on the structural condition of the following components:

- General PBF Boiler Building[1]
- Coal Unloading Crane, Transfer Structures and Conveyors
- Screen Houses 1, 2, and 3
- RDF Overhead Conveyors and Transfer Building
- MCAPS Overhead Duct System
- Pebble Lime and Dolomitic Lime Silos
- Air Handling and Air Pollution Control Structures, including Stack
- Staircase and Catwalk Structures
- Concrete pad over the former Track Hopper Room

[1] Scope does not explicitly note this bullet however HDR understands they were to be included in the study

- Boiler hanger supports[2]

These areas are identified on the site plan documents attached in Exhibit A.

Summary of Activities

HDR performed site visits September 24-25, 2024; November 6-7, 2024; and February 10th, 2025 for a total of five days on-site evaluating the above mentioned areas/equipment at the CSWS RRF. During these evaluations HDR recorded visual observations, spot checked the thickness of select support hangers and structural members, took photos of select observations, and measured cracks/gaps that were observed to be present in different locations throughout the PBF and other structures.

On March 27 2025, the HDR team returned to MIRA to obtain video and photos of the roofs and upper walls of the PBF and stack by flying an unmanned aerial vehicle (i.e., "drone") outfitted with a camera and transmitting video to the drone pilot on ground. The purpose of this follow-up visit was to investigate the conditions of some of the facilities' roof that were unobservable during previous visits, due to their very tall height and/or inaccessibility.

The focus of these efforts was to identify current hazards that existed in the locations identified in the scope of the evaluation, prescribe an immediate action to mitigate any concerns, and identify an appropriate reinspection frequency.

HDR developed a site inspection checklist documenting the most notable observations that were made. The checklist will also be used by a future inspector to verify that the conditions identified by HDR are not worsening, and to add newly observed items.

HDR used a 5-category rating system to rate the condition of the structures and equipment that were observed. The definitions for these rating classifications are shown below. It is important to note that the intent of this rating system was to classify observed hazards that could cause harm to personnel working or traversing through an area. As such, not all observations are specific to a concern about the structural integrity of support structure or piece of equipment, for example. Rather, most of the poorer rated observations relate to observations such as loose exterior building cladding, or missing/damaged handrails. The following are brief descriptions for each of these ratings:

Excellent: No observed concerns

Good: No observed concerns

Fair: No immediate hazard to personnel working or traversing through the area was observed.

Poor: Area should be barricaded off and hazard should be monitored for further deterioration.

Critical: Area should be barricaded off and the hazard should be monitored for further deterioration and consideration should be made to address the hazard.

HDR notes that in most instances where a hazard was identified and was significant enough to

[2] Scope does not explicitly note this bullet however HDR understands they were to be included in the study

qualify for a Poor or Critical rating, the recommendation made was to barricade the area off to prevent access. Being that these facilities and equipment will ultimately be demolished and removed, there is no reason to expend capital reserve money to perform repairs so long that the area can be avoided entirely. In some cases a corrective action, or the recommendation to install a crack or movement monitor, was suggested as an additional measure for consideration.

Description of Areas Observed

General PBF Boiler Building

The boiler building houses RDF boiler 11, 12 and 13. This 66' by 170' by 125' high metal frame structure incorporates the south wall of the original power plant, which is constructed of brick. The boiler building also shares a common wall with the original turbine hall on the west side and the original power plant on the north side. When the RDF boilers were installed in 1988, the height of the structure was increased. Metal wall panels were used to enclose the additional area on the south and west walls as well as the entire east wall. There are three banks of windows on the original south wall and six ventilation louvers above the window elevation on the building extension. There are also a number of ventilation louvers on the east and west walls. The building roof is constructed of metal decking, insulation and a rubber membrane. There are eight ventilation fans, six steam relief silencers, three skylights/access points and numerous vent pipes on the roof. There is also a small dust collector on the boiler building roof which previously served the coal silo. The RDF Feeder Bay is attached to the east side of the boiler building and has a slightly lower roof line. This building is approximately 25' by 170' by 114' high. The roof on this structure is also constructed of metal decking, insulation and a rubber membrane covered with crushed stone. This roof has two ventilators and six pickup points connected to the MCAPS system.

Coal Unloading Crane, Transfer Structures and Conveyors

The Coal Unloading Crane is constructed just offshore of the riverbank. The structure consists of a multi-story structural steel tower built atop a multi-level concrete platform supported on concrete piles extending down to the riverbed. At high tide, the Connecticut river submerges the lowest-level platform, depositing an approximately 3"-to-6" layer of sand on the platform floor when the water recedes. However, HDR observed little-to-no damage from the water's activity. The facility is generally in very good condition.

Screen Houses

The north screen house (Screen House 1) is located on the river side of the dike and serves as the cooling water intake for TG 6. This approximately 24' by 30' structure includes two circulating water pumps (one operating, one standby) and two traveling trash screens. The northwest screen house is approximately 30' high with the bottom at Elevation minus 11'-0". The top floor has brick walls while the rest of the building is poured concrete with a brick exterior on the portions of the concrete that are above grade. There is one wall fan on upper floor east side and a steel fish return chute on the south side. The north screen house reportedly dates back to 1949.

The central screen house (Screen House 2) is located between Screen Houses 1 and 3 and formerly provided cooling water for an additional T/G that was removed from the site when the

facility was retrofitted to process RDF in 1988. As a result it has been unused for approaching 40 years. It is also approximately 30' high with a bottom Elevation of minus 11'-0" where the circulating intake pipes used to pull water in from the river. The top floor has brick walls while the rest of the building is poured concrete with a brick exterior on the portions of the concrete that are above grade.

The south screen house (Screen House 3) is located downstream of the northwest screen house and serves as the intake for cooling water for TG 5 and service water for process needs. This approximately 47' by 22' structure includes two circulating water pumps (one operating, one standby), two service water pumps (one operating, one standby) and four traveling trash screens (two for circulating water and two for service water). The south screen house is approximately 30' high with the bottom at Elevation minus 11'-0". The top floor has brick walls while the rest of the building is poured concrete with a brick exterior on the portions of the concrete that are above grade. The east side of the building has a fresh air supply system that serves each of the lower floor levels. There is a steel fish return chute on the south side. The south screen house reportedly dates back to 1937 and was modified in the 1988 time frame when the RDF boilers were installed. The service water pumps were installed at that time.

RDF Overhead Conveyors and Transfer Building

The RDF Overhead Conveyors are used to transmit solid material from the Waste Processing Facility to the Power Block Facility for usage as part of the power generation process. These showed a small amount of rust on the exterior metal undersides, a few broken footings at ground level, and severe flooding within the connecting point at the Refuse Derived Storage facility. However, the structural integrity of the conveyor appears intact.

The Transfer Building is a multi-story building connecting six conveyor tunnels between the Crane Unloading Building, the PBF, the Coal Pile, and the Refuse Derived Storage facility. This structure serves as a connecting hub for the conveyors, diverting material traveling to-and-from the Refuse-Derived Storage, the Coal Unloading Crane, the Coal Pile, and the Power Block Facility (PBF). This building also showed little-to-no damage.

MCAPS Overhead Duct System

The Mid Connecticut Air Processing System (MCAPS) was installed in 2001 to collect and transport potentially odiferous air from the WPF to the boiler building for use as combustion air in the boilers. The aluminum ductwork appeared to be in good condition.

Pebble Lime and Dolomitic Lime Silos

These silos were used to store pebble lime and dolomitic lime which were reagents used to adjust the pH level of the ash product. The structural condition of these silos were difficult to determine by visual observation due to the coating of spilled lime and grit on the exterior.

Air Handling and Air Pollution Control Structures, Including Stack

Each boiler has a dedicated APC train. The flue gas travels through the Spray Dryer Absorber (SDA) vessel, where a lime slurry is injected through a rotary atomizer to neutralize acid gases consisting of sulfur dioxide (SO2) and hydrogen chloride (HCl). After the SDA, the flue gas travels

through a reverse air fabric filter baghouse where particulate is captured in fabric filter bags. The cleaned flue gas exits the baghouse, being drawn through the system by an induced draft (ID) fan. The discharges of the three ID fans combine into a common duct and exhaust out through a common stack.

Stairways and Catwalk Structures

The interior of the PBF includes a series of galvanized, perforated, anti-skid, metal grated flooring, walkways, and stairwells. These are generally in reasonably good condition; however, there are a few locations where the supports have weakened, and the flooring deflects significantly under the weight of normal human foot traffic. These must be either taped off or fixed as soon as possible. Additionally, there are multiple concrete catwalks within the PBF. Most of these are still in reasonably safe condition; however, the railing on some of them has broken, so that persons walking along those catwalks are unprotected against slipping and plunging several stories to the floor below. These areas have been taped off; however, they still remain a serious hazard to building visitors.

Concrete Slab Over Former Track Hopper Room

The concrete slab over the Track Hopper Room was designed to support rail cars unloading coal. A sign is posted indicating a load limit for the concrete slab of 1,200lb gross vehicle weight, and concrete barricades have been placed around the pad to prevent vehicles from traveling over it. Based on HDR' s observations of the Trach Hopper Room below the pad, HDR recommends the barricades be maintained and the load limitation remain.

Boilers Hanger Supports

The PBF houses three C-E Model VU40 waterwall furnace, spreader-stoker boilers with traveling grates each rated at 677 tons per day of design RDF. These are referred to as Boiler 11, Boiler 12 and Boiler 13. The rated steam capacity of each boiler when combusting RDF was 231,000 pounds per hour at a superheater outlet temperature of 825 degrees Fahrenheit (oF) and a pressure of 880 pounds per square inch gauge (PSIG). These boilers were designed to generate steam which was sent through two, 45 MW (50 MVA) steam turbine-generators (TG) referred to as TG 5 and TG 6.

The VU-40 boiler is supported by hangers from the top of the boiler. The hangers, which are comprised of approximately 45 rods (sizes vary from ¾" to 2" diameter), are spaced as required to support various components and weights of the unit. The hangers attach to steel girders at the top of the boiler building such that the boiler effectively "hangs" in place. The boilers are attached in this manner to allow them to expand and contract vertically when they are thermally cycled.

Boiler Hanger Analysis

HDR visually documented some of the observable hangers supports and also took spot readings of the rod diameters as described in more detail in the checklist and photo log. The entire boiler should be washed down to fully remove ash, dust, and grit that covers many of the nuts that hold the hanger rods in place to allow for better future visual observations.

HDR was able to visually observe and take spot readings of different hanger rods on all three

boilers. Although HDR was not able to obtain structural drawings of the boiler support system for this facility, HDR was able to obtain drawings for the same VU-40 boiler that was installed at the H-POWER facility located in Kapolei, Hi and for the purposes of this study has made the assumption that the boiler hanger system design is substantially similiar to that of the CSSW RRF. Several drawings obtained from Drawing Set #28185 showed the hanger rod dimensions and provided sectional views of the boiler system which HDR was able to correlate with observations and measurements taken in the field. For the limited number of spot readings we were able to obtain on each of the boilers, the measurements appear to align with the design dimensions denoted in the H-POWER structural drawings, indicating there has not been any significant material loss due to corrosion.

In addition, it is important to note that the boiler structures weigh significantly less than the weight they were original designed to carry. This is due to the removal of the screen tubes, general wall thickness loss of the boiler waterwall panels, and most notably, the fact that the boilers are not holding water. Drawing 28185-1E0001 Rev 9 provides a table of water weights that shows a total water weight of 171,266 lbs (85.6 tons) when the boiler is filling to the typical operating water level, and 226,109 lbs (113 tons) when entirely filled. HDR assumes that the weight of this water may be as much as 20% of the total weight of the boiler.

HDR's visual observations cannot rule out the possibility of stress corrosion cracking or other microscopic degradation to some of the boiler support hangers, and Non-Destructive Examination (NDE) testing could provide more comprehensive findings. If the intent was to refurbish and operate these boiler for another 30 years it may be prudent to perform more comprehensive inspection on these hangers and even consider replacing them, due to the additional thermal cycling and dynamic loading they will be subjected to over the next operating lifespan. However; considering these boilers will no longer be operated the hanger rods only need to withstand the static load of the empty boiler. HDR did not observe anything from its visual findings or spot field measurements that indicated cause for concern regarding the structural integrity of the boiler hanger support system.

Drone Findings

Video was recorded for the entire drone flight and used to obtain still footage of the team's observations as part of this report's documentation. Drone footage captured several additional items that have been added to the checklist, the most notable including:

- A large portion of the Ash Loadout Building roof that has caved in (Checklist Item #79, Photo D.04)
- A section of roof on Baghouse 12 that has become unsecured and peeled back (Checklist Item #81, Photo D.06)
- A large hole on Screenhouse #2 roof (Checklist Item #85, Photo D.10)
- Closeup views of the PBF building parapet wall and brick façade on the Northwest and Northeast end of the PBF showing the separation of the brick façade and listing of the parapet wall ((Checklist Items #86-88, Photo D.11-D.13).

General Findings

HDR identified a total of 59 line items for the inspection checklist. Out of the 89 items, 4 were rated 'Excellent', 27 were rated 'Good', 30 were rated 'Fair', 16 were rated 'Poor', and 11 were rated 'Critical'.

The items identified as 'Critical' and HDR's recommended corrective actions for these items are shown in the following Table 1:

Table 1: MIRA Inspection Items Identified as "Critical"

Item/ Photo #	Location	Inspection Findings	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency
SH.6	Screenhouse #2, NW staircase	This is a hazard to inspectors/personnel who may need to access the 2nd floor of this building	Barricade stairs to avoid any further access.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	6 months
PBF.03	North end, east side PBF high roof	Brick façade appears to be separating from building structure (circled in yellow) and parapet wall is leaning.	Barricade area at ground level to prevent anyone from standing in front of this parapet wall. Consider adding crack and movement monitors to wall to monitor wall conditions. If facade separation continues, consider adding bracing to backside of parapet wall to stabilize wall.	Document current condition with photographs and compare to originally observed condition. Inspect wall from roof side to verify movement, brick/joint conditions, and review crack and movement monitors on a continuous basis.	6 months or after severe windstorms of 70mph gusts or higher
PBF.06	South end, west side PBF high roof	Metal paneling that has fallen onto the low roof level underneath.	Barricade area and prevent access to areas underneath falling object hazards.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher
PBF.07	South end, west side	Missing siding is exposing interior equipment and structural members to rain, snow and wind.	Recommend covering this opening to keep rain and snow out of the interior of the building.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher

Item/ Photo #	Location	Inspection Findings	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency
PBF.08	South end, west side	Exterior wood paneling is bowing & may detach & fall onto low roof below; metal paneling has fallen due to fully rusted & deteriorated connections	Barricade area and prevent access to areas underneath falling object hazards. Consider removing & replacing with water-resistant panels to eliminate potential for falling plywood & metal	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher
PBF.13	PBF Interior, NE corner, (10th Floor)	Opening in ceiling, possible where a roof ventilation fan or roof hatch used to be located.	Seal opening to prevent rain and snow from further corroding the structural components supporting Boiler 11.	Document current condition with photographs and compare to originally observed condition. Confirm area has been appropriated sealed from rain and snow.	6 months
PBF.31	PBF interior, Boiler room (9th Floor)	Lagging and insulation is broken off and hanging. Potential falling item hazard. Building siding is missing exposing interior to rain/snow.	Barricade area and prevent access to areas underneath falling object hazards. Consider removing loose and fallen paneling and seal the building (see photo PBF.6 and PBF.7) from rain/wind.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access and/or hazards have been removed. Confirm building siding has been repaired to seal the building from rain/snow.	6 months
PBF.32	PBF interior, 8th floor	A light fixture has partially fallen and hangs across the walkway at head height which poses an eye poke/head collision hazard.	Remove or repair light fixture.	Document current condition with photographs and compare to originally observed condition. Confirm hazard has been removed.	6 months

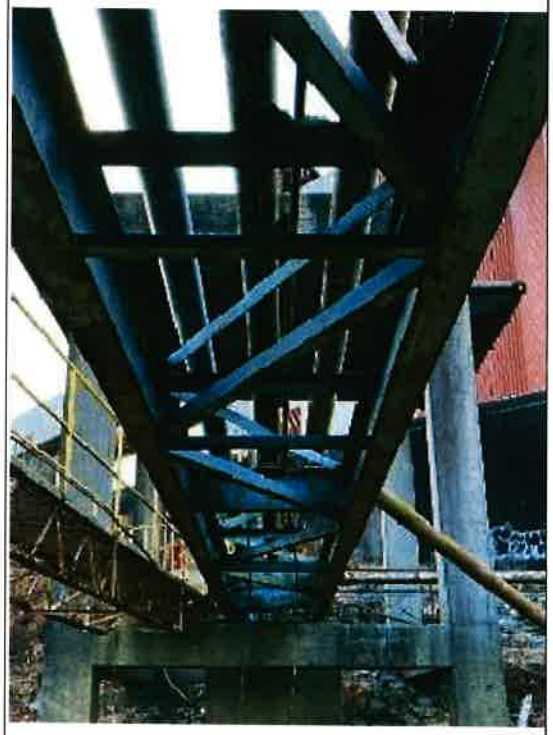
Item/ Photo #	Location	Inspection Findings	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency
PBF.33	PBF interior, 8th floor	Guardrails are missing and/or deteriorated which poses a fall safety hazard.	Barricade area to avoid access. Consider replacing guardrail.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless repairs have been made.	6 months
PBF.34	PBF interior, 7th floor by elevator	Economizer hopper lagging and insulation has broken off and hanging loose. Potential falling item hazard.	Remove lagging and insulation. Prevent access to area underneath until hazard is removed.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless hazard has been removed.	6 months
D.04	Ash loadout building	Section of roof has caved in.	Barricade building. Scheduled for demolition as part of Solid Waste Closure Plan.	Maintain barricades until demolition.	6 months or after severe windstorms of 70mph gusts or higher

MIRA HARTFORD BOILER FACILITY
MAINTENANCE INSPECTION PHOTO LOG

Coal Tower and Conveyors

CU.1			
CU.2			

CU.3			
CU.4			

CU.5			
CV.1			

CV.1 (cont.)			
CV.2			

CV.2 (cont.)



CV.3





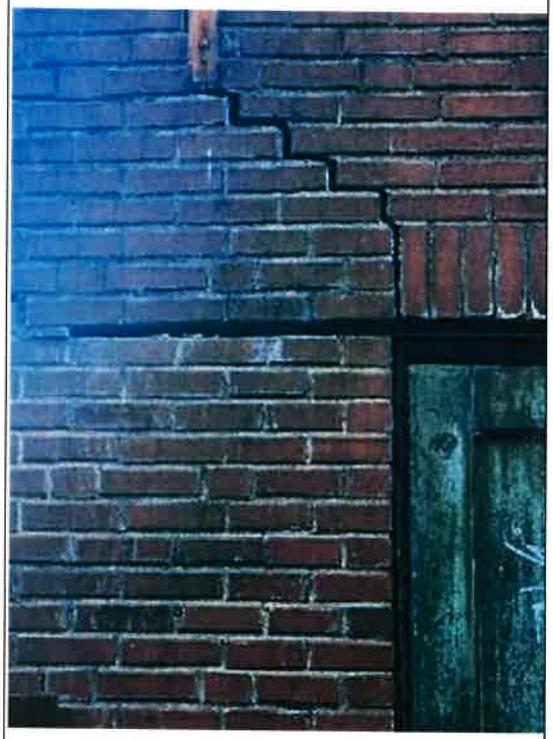
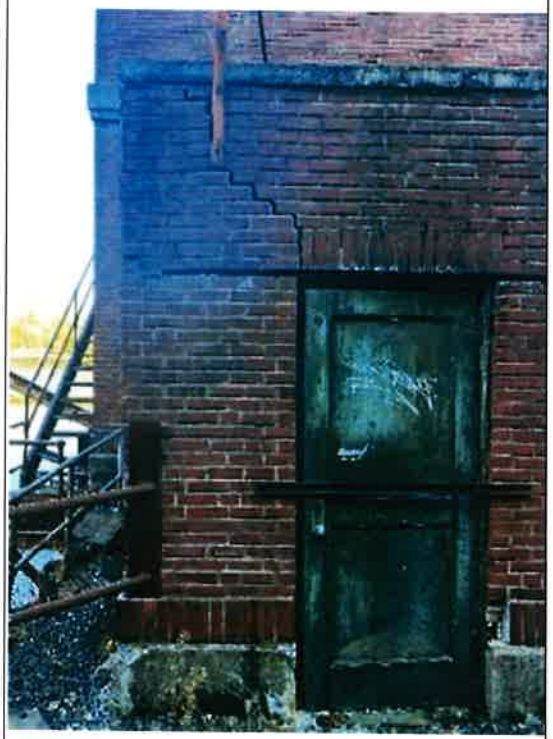
CV.4			

Screenhouse

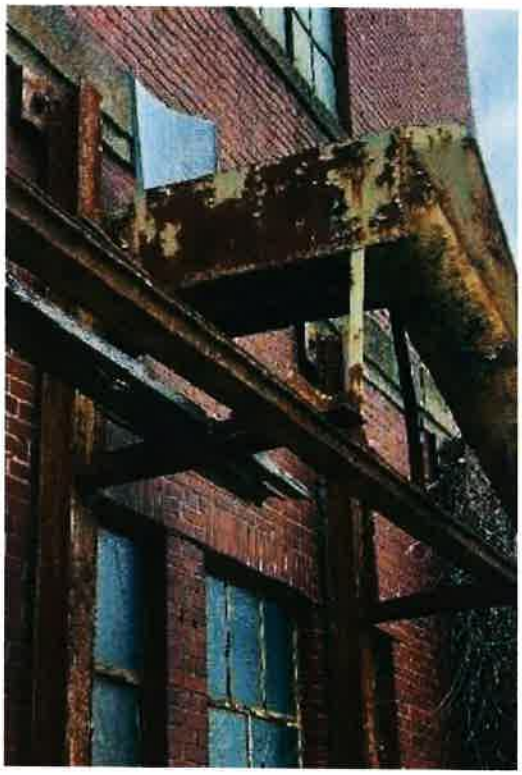
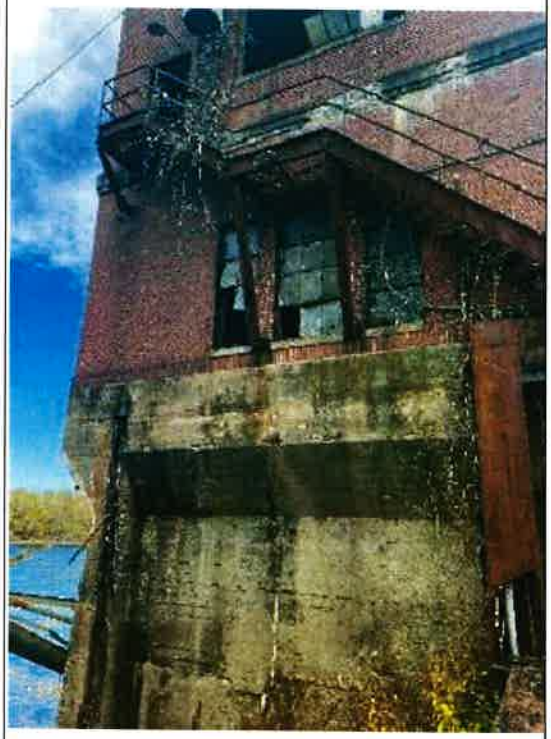
SH1.1			
SH1.2			

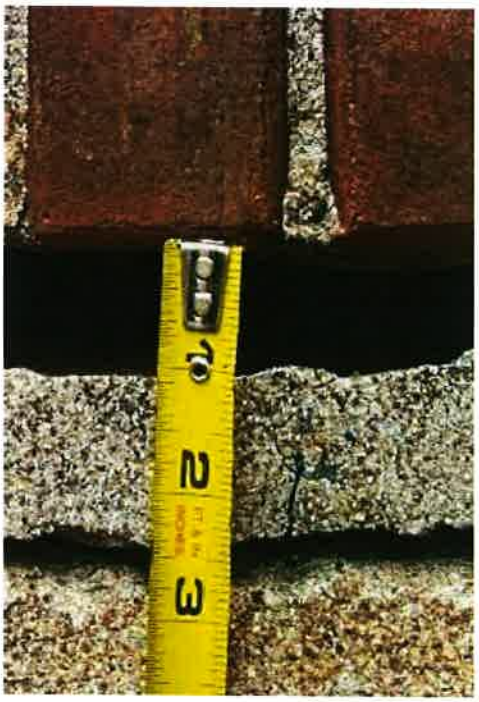
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SH1.3			

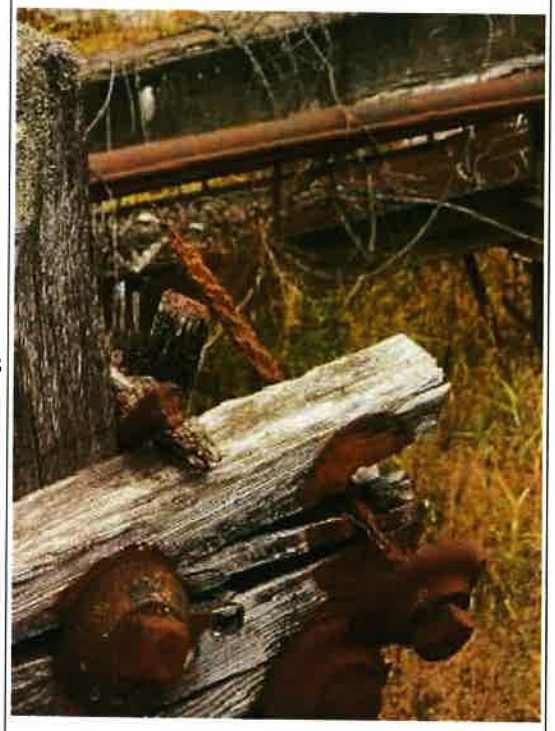
SH1.4			
			

SH2.5			
		**SH2.6**	

SH2.6 (cont.)		SH2.7	
SH2.8			

SH2.9			
SH2.10			

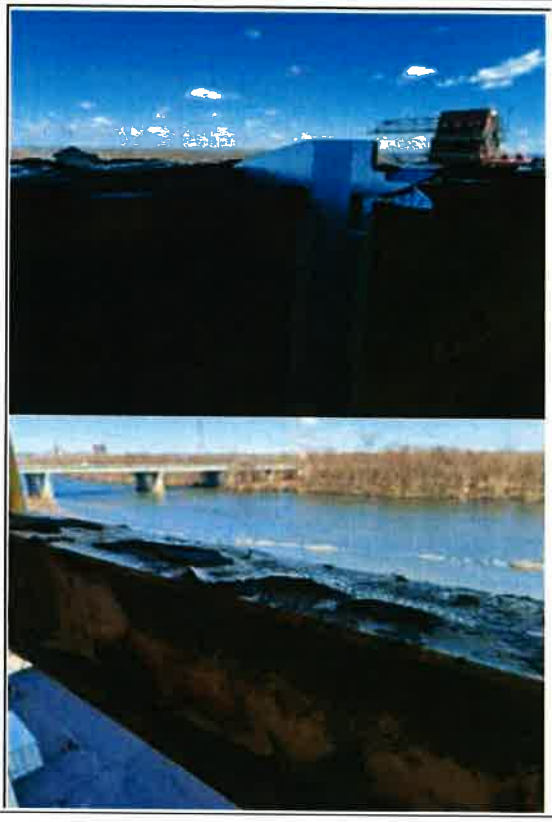
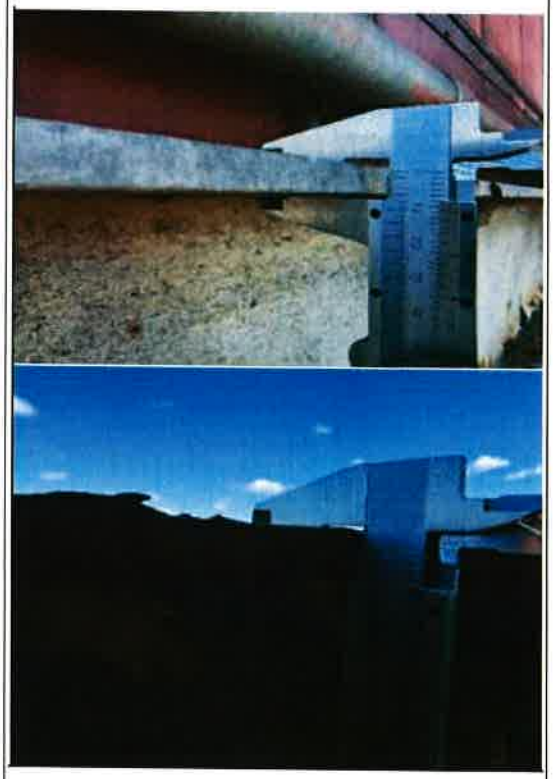
SH2.11			
SH2.12			

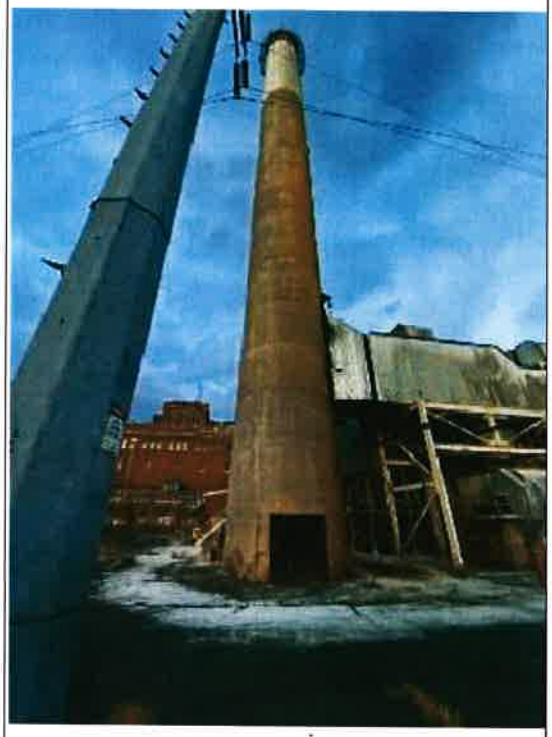
SH2-3.13			
SH3.14			

PBF Exterior

PBF.1		**PBF.2**	
PBF.3		**PBF.4**	

PBF.5		**PBF.6**	
PBF.7		**PBF.8**	

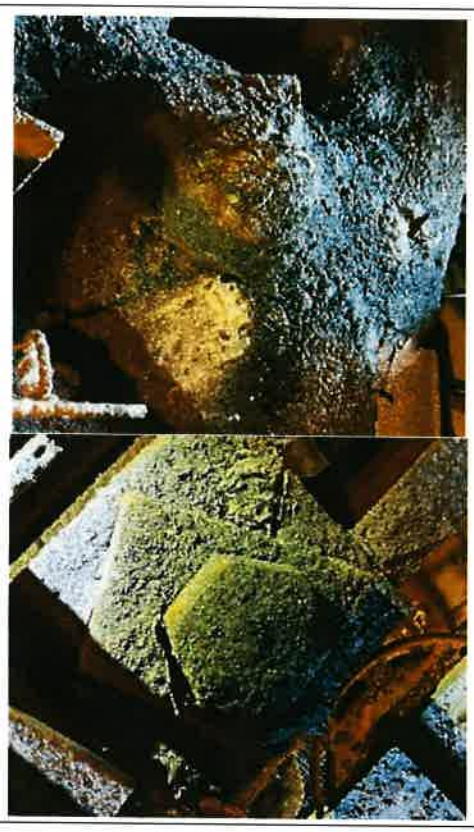
PBF.9		**PBF.10**	
PBF.11		**PBF.12**	

ST.1		**ST.2**	

PBF Interior

PBF.13		PBF.14	
PBF.15		PBF.16	

PBF.17		PBF.18	
PBF.19		PBF. 20	

PBF.21		PBF.22	
PBF.23		PBF. 24	

PBF.25		PBF.26	
PBF.27		PBF. 28	

PBF.29		**PBF.30**	
PBF.31		**PBF.32**	

PBF.33		**PBF.34**	
PBF.35		**PBF. 36**	

PBF.37		**PBF.38**	
PBF.39		**PBF.40**	

Baghouse

BH11.A		BH11.B	
BH11.C		BH11.D	

BH11.E		**BH11.F**	
BH11.G		**BH11.H**	

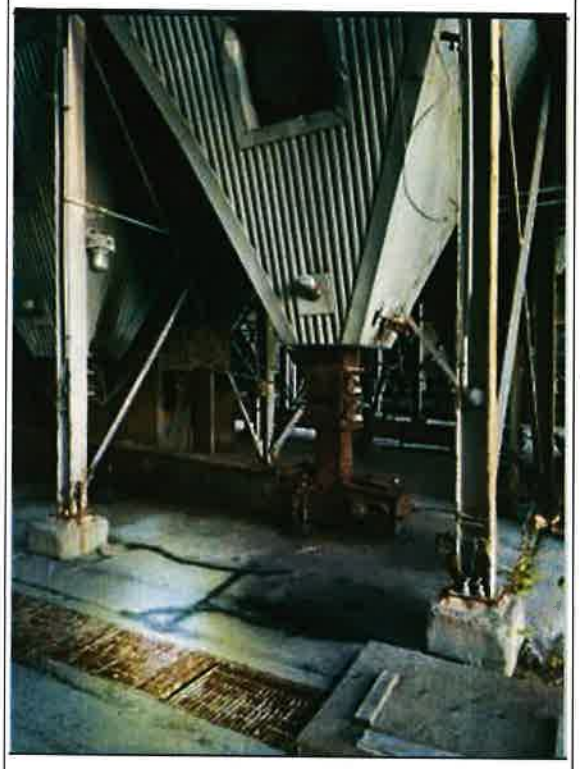
BH11.I		**BH11.J**	
BH11.K		**BH11.L**	

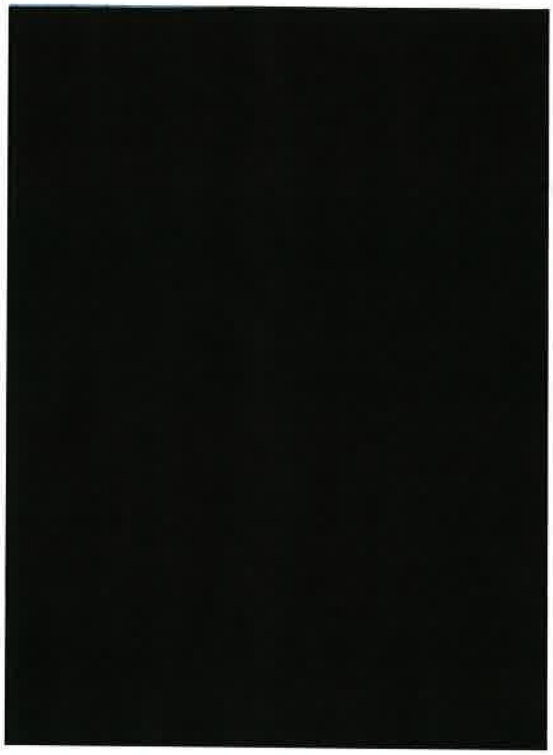
BH11.M		BH11.N	
BH11.O		BH11.P	

BH11.Q		**BH11.R**	
BH11.S		**BH11.T**	

BH11.U		**BH11.V**	
BH11.W		**BH11.X**	

BH11.Y		**BH11.Z**	
BH11.AA		**BH11.BB**	

BH12.A		**BH12.B**	
BH12.C		**BH12.D**	

BH12.E		BH12.F	
BH12.G		BH12.H	

BH12.I		**BH12.J**	
BH12.K		**BH12.L**	

BH12.M		**BH12.N**	
BH12.O		**BH12.P**	

BH12.Q		**BH12.R**	
BH12.S		**BH12.T**	

BH12.U		BH12.V	
BH12.W		BH12.X	

BH12.Y		**BH12.Z**	
BH12.AA		**BH12.BB**	

BH13.A		**BH13.B**	
BH13.C		**BH13.D**	

BH13.E		**BH13.F**	
BH13.G		**BH13.H**	

BH13.I		**BH13.J**	
BH13.K		**BH13.L**	

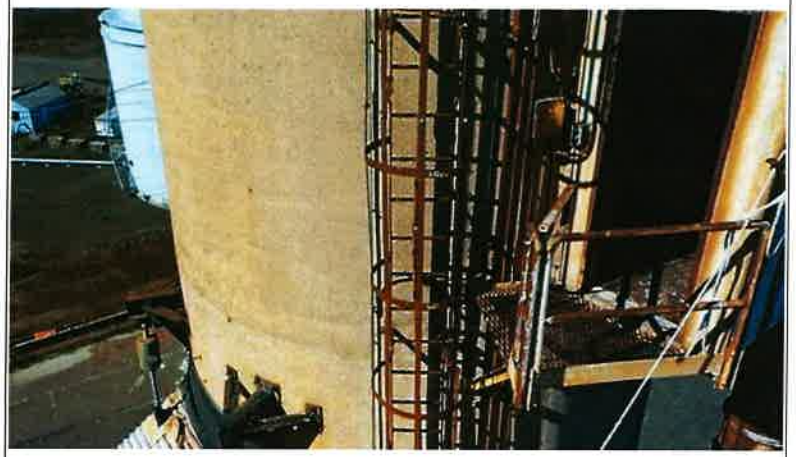
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BH13.O		BH13.P	

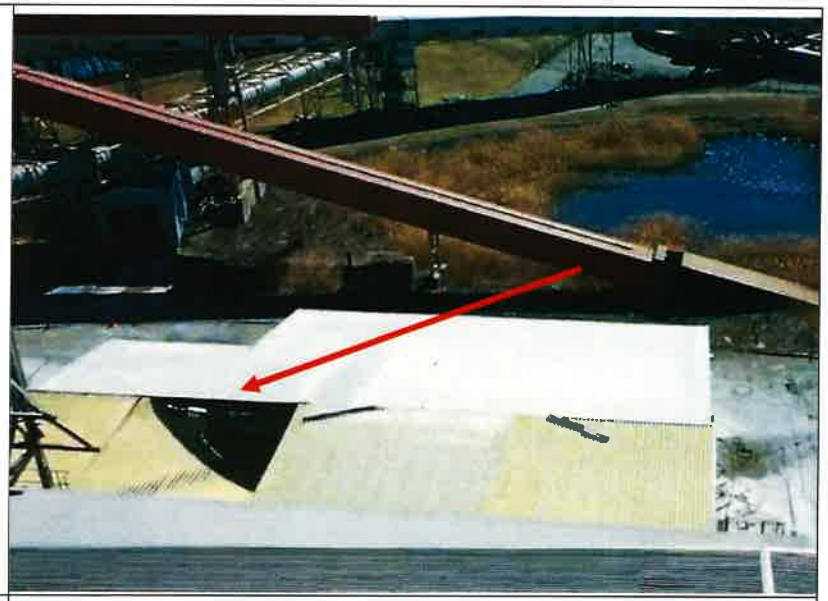
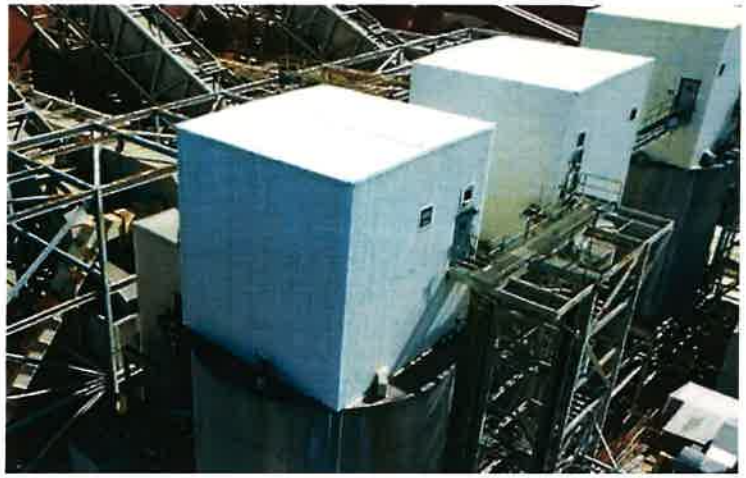
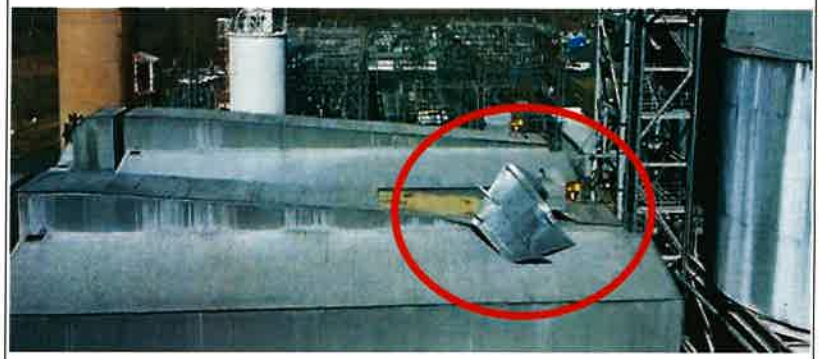
BH13.Q		**BH13.R**	
BH13.S		**BH13.T**	

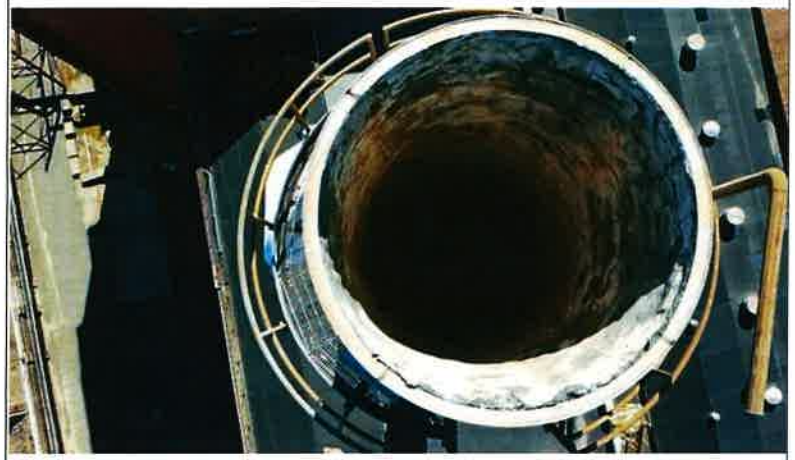
BH13.U		**BH13.V**	
BH13.W		**BH13.X**	

BH13.Y		BH13.Z	
BH13.AA		BH13.BB	

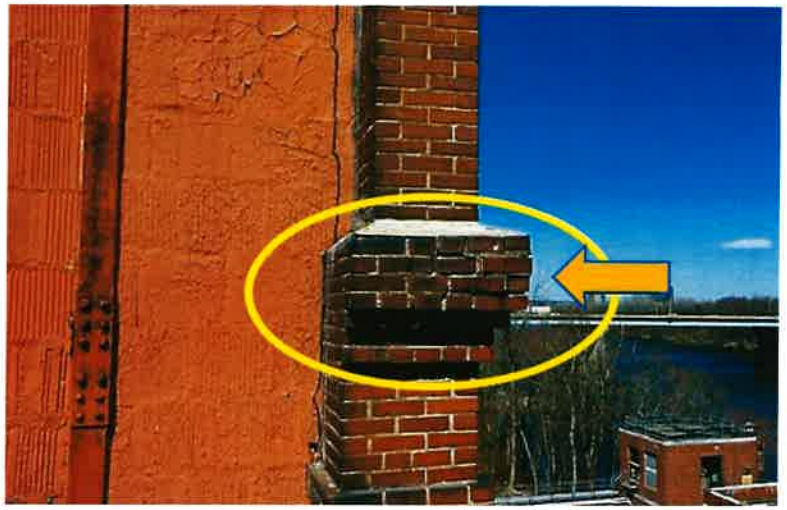
Drone Photos

D.01		**D.01 (cont.)**	
D.02		**D.02 (cont.)**	

D.03		**D.04**	
D.05		**D.06**	

D.07		**D.07 (cont.)**	
D.08		**D.09**	

D.09 (cont.)		**D.10**	
D.11		**D.11 (cont.)**	

D.12		**D.12 (cont.)**	
D.13		**D.14**	

MIRA HARTFORD BOILER FACILITY
MAINTENANCE INSPECTION CHECKLIST

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
1	CU.1	First floor and second floor of coal unloading crane	Localized missing finish on steel with minor corrosion	Excellent	Barricade access to coal unloading crane.	Document current condition with photographs and compare to originally observed condition. Check to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
2	CU.2	Framing members at coal unloading crane, 2nd floor and beyond	Localized missing finish on steel with minor corrosion	Excellent	None.	Document current condition with photographs and compare to originally observed condition. Check to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
3	CU.3	Framing members at coal unloading crane, 2nd floor and beyond	Localized missing finish on steel with minor corrosion	Excellent	None.	Document current condition with photographs and compare to originally observed condition. Check to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
4	CU.4	Ground level slab of coal unloading crane	Evidence of high water levels; however, no evidence of structural damage	Excellent	None.	Compare photographic evidence to determine if any changes in conditions from year to year	1 year		
5	CU.5	Platforms connecting the main facility to the first level of the coal-unloading crane. Far east side of facility	Corrosion is surface-level only; however, platforms have thinner structural members & thus more susceptible to rust penetrating through the structure	Good	None.	Document current condition with photographs and compare to originally observed condition. Measure thicknesses of flanges & webs with calipers; also, compare photographic evidence to see if rust eventually exceeds 50% of surface area	1 year		
6	CV.1	Conveyor closest to ground level, outside of SE side of PBF	Large cracks and pieces broken off indicate high stress on the connection	Poor	Barricade access around this conveyor until it is removed	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	6 months		
7	CV.2	Conveyors stemming from transfer building	Presence of corrosion indicates that moisture can seep through & entrap w/o evaporating	Good	Given that conveyor is no longer to be used, no corrective action is required. Monitor the condition of structural elements over time and consider restricting access	Compare photographic evidence to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
8	CV.3	Conveyors stemming from transfer building	When walking inside the conveyors, there appeared to be no evidence that corrosion penetrated to affect structural integrity	Fair	Given that conveyor is no longer to be used, no corrective action is required. Monitor the condition of structural elements over time and consider restricting access	Compare photographic evidence to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
9	CV.4	Conveyors stemming from transfer building	No local buckling	Good	Given that conveyor is no longer to be used, no corrective action is required. Monitor the condition of structural elements over time and consider restricting access	Compare photographic evidence to see if rust eventually exceeds 50% of surface area; if so, then begin measuring widths of flanges, webs, & bolts on structural members	1 year		
10	CV.5 (no photo)	Coal Conveyor	Did not enter due to concerned conditions of conveyor and safety concerns	Not Rated	Barricade access to conveyor to restrict access.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	1 year		

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
11	SH.1.1	Screenhouse #1, ground floor and basement floor grating	Overall, grating seems in decent condition.	Good	Barricade stairs to avoid any futher access.	Document current condition with photographs and compare to originally observed condition to determine if condition has worsened.Check if any bolts or connections have become loose since previous visit.	1 year		
12	SH.1.2	Screenhouse #1, steel framing and connections underneath ground floor grating	Overall, grating seems in decent condition.	Good	Barricade stairs to avoid any futher access.	Document current condition with photographs and compare to originally observed condition to observe if corrosion has worsened, which could indicate weakened structural integrity.	1 year		
13	SH.1.3	Ceiling of top floor of 1st screenhouse	Building's location near brackish water vapor may contribute to rotting & deterioration	Good	Barricade stairs to avoid any futher access.	Document current condition with photographs and compare to originally observed condition to determine if deterioration has progressed or stabilized	1 year		
14	SH.1.4	Screenhouse #1 front entrance	Gravel washout may indicate weakening support for brick façade; crack width = approx. 1/2 inch	Fair	Barricade stairs to avoid any futher access.	Compare photographic evidence to see if (1) façade cracks widen, (2) façade begins to bow outwards, (3) washout grows larger, & (4) foundation shows differential settlement	1 year		
15	SH.2.5	Screenhouse #2, SW façade	Cracks in brick façade of screenhouse #2 = approximately 1/2 inch width, potentially widening	Fair	Add barricades to area to prevent personnel from accessing area in case of partial building collapse	Document current condition with photographs and compare to originally observed condition to determine if condition has worsened (i.e., settlement continues, cracks continue to widen, or more noticeable failures are occuring)	1 year		
16	SH.2.6	Screenhouse #2, NW staircase	This is a hazard to inspectors/personnel who may need to access the 2nd floor of this building	Critical	Barricade stairs to avoid any futher access.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	6 months		
17	SH.2.7	Screenhouse #2, NW façade	Conditions indicate ongoing structural damage to 2nd floor framing system and to the integrity of the masonry wall system.	Poor	Barricade access to screenhouse.	Document current condition with photographs and compare to originally observed condition to determine if condition has worsened.	1 year		
18	SH.2.8	Screenhouse #2 SE face of building	Chute and Chute supports - appear in good condition, though the upper attachment point for the cable could not be closely observed.	Good	None.	Document current condition with photographs and compare to originally observed condition to monitor the condition of the pipe hanger and connection over time. Confirm necessary areas are still appropriately barricaded from access.	1 year		
19	SH.2.9	Screenhouse #2 SE face of building	Over time, potential for pipe collapse after multiple severe wind storms	Fair	Barricade access to screenhouse.	Future inspections to measure steel corrosion and material loss on steel	1 year		
20	SH.2.10	Foundation of screenhouse #2	Rebar & foundation vulnerable to damage from water infiltration into cracks	Fair	Barricade access to screenhouse.	Future inspections to measure rebar & crack widths up close, & plot progress over time	1 year		
21	SH.2.11	Screenhouse #2 extension foundation	Reinforcement is vulnerable to corrosion if not covered with concrete	Good	Barricade access to screenhouse.	Monitor the condition of exposed rebar over time by using caliper to measure extent of rusting	1 year		
22	SH.2.12	Screenhouse #2 extension foundation	Indicative of water damage due to river overflow, washout/ settlement beneath structure, crack width = 1 inch	Poor	Barricade access to screenhouse. Consider installing crack monitors to monitor movement of crack between wall and foundation	Monitor extent of sagging foundation by measuring the crack width and length over time	1 year		
23	SH.3.13	In between screenhouse #2 and #3	Wood and bolts in deteriorated state	Good	Barricade area to avoid access to wooden structure.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	1 year		
24	SH.3.14	Screenhouse #3, NW door entrance	Due to significant concrete spalling & deterioration, structural integrity of the walkway may be compromised	Poor	Barricade walkway to avoid any futher access.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	1 year		

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
25	PBF.01	East side of PBF, catwalk to screen house	Structural members significantly deteriorated due to rust	Poor	Barricade area around catwalk to avoid access.	Document current condition with photographs and confirm necessary areas are still appropriately barricaded from access.	1 year		
26	PBF.02	East side of PBF, by metals materials storage	Some movement has occuring within the brick which is causing the separation (contribution from weather events/maintenance of joints and/or lack of joints between structures)	Good	None.	Document current condition with photographs and compare to originally observed condition. Monitor the size of crack over time.	1 year		
27	PBF.03	Northand east side of PBF, high roof	Brick façade appears to be separating from building structure (circled in yellow) and parapet wall is leaning.	Critical	Barricade area at ground level to avoid falling brick or collapse of parapet wall on personel. Consider adding crack and movement monitors to wall to monitor wall conditions. If facade separation continues, consider adding bracing to backside of parapet wall to stabilize wall.	Document current condition with photographs and compare to originally observed condition. Inspect wall from roof side to verify movement, brick/joint conditions, and review crack and movement monitors on a continous basis.	6 months or after severe windstorms of 70mph gusts or higher		
28	PBF.04	West side of PBF, lower roof	Loose pieces of concrete façade chipped away, already fallen onto the low roof, poses falling object hazard to personnel	Fair	Barricade area and prevent access to areas underneath falling object hazards.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months		
29	PBF.05	South side of PBF, high roof	Conveyor attachment point is severely rusted, with pieces and sheets of metal hanging from it.	Fair	Barricade area and prevent access to areas underneath falling object hazards.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher		
30	PBF.06	South end, west side of PBF, high roof	Metal paneling that has fallen onto the low roof level underneath.	Critical	Barricade area and prevent access to areas underneath falling object hazards.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher		
31	PBF.07	South end, west side of PBF, high roof	Missing siding is exposing interior equipment and structural members to rain, snow and wind.	Critical	Recommend covering this opening to keep rain and snow out of the interior of the building.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher		
32	PBF.08	South end, west side of PBF, high roof	Exterior wood paneling is bowing & may detach & fall onto low roof below; metal paneling has fallen due to fully rusted & deteriorated connections	Critical	Barricade area and prevent access to areas underneath falling object hazards. Consider removing & replacing with water-resistant panels to eliminate potential for falling plywood & metal	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	6 months or after severe windstorms of 70mph gusts or higher		
33	PBF.09	PBF exterior, 7th floor exterior stairway, north end, west side	Some of the structural members have experienced corrosion due to lack of protective coating	Fair	None.	Document current condition with photographs and compare to originally observed condition. Track metal loss of structural members.	1 year		
34	PBF.10	PBF exterior, 7th floor exterior stairway, north end, west side	Significant flaking of steel. Areas where flaking has occurred measured to a thickness of 4/16"	Fair	None.	Document current condition with photographs and compare to originally observed condition. Track metal loss of structural members.	1 year		
35	PBF.11	PBF exterior, 7th floor exterior stairway, north end, west side	I-beam web thickness measured at 5/16" in two other locations on stair tower	Good	None.	Document current condition with photographs and compare to originally observed condition. Track metal loss of structural members.	1 year		
36	PBF.12	PBF exterior, ground level looking up at ash conveyor	Ash conveyor structural steel appears corroded and condition of interior floor should be tested before personnel is allowed to walk on it.	Fair	Barricade area and prevent access to areas underneath falling object hazards.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access.	1 year		
37	ST.1	Stack/Chimney - Exterior	Exterior of stack appears to be in good condition.	Good	None.	Determine based on photographic evidence obtained during drone inspection.			
38	ST.2	Stack/Chimney - Interior floor & walls	The interior and floor of the stack is covered in dirt and grime and difficult to fully inspect	Good	Barricade access to stack interior. Consider cleaning interior of stack (wall and floor) to be able to further inspect conditions. Use drone to inspect upper levels of stack.	Determine based on photographic evidence obtained during drone inspection.			

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection New Rating	Date of Reinspection
39	PBF.13	PBF Interior, NE corner, (10th Floor)	Opening in ceiling, possible where a roof ventilation fan or roof hatch used to be located.	Critical	Seal opening to prevent rain and snow from further corroding the structural components supporting Boiler 11.	Document current condition with photographs and compare to originally observed condition. Confirm area has been appropriated sealed from rain and snow.	6 months		
40	PBF.14	PBF Interior, NE corner, (10th Floor)	Broken structural member presents hazard to persons walking on this catwalk.	Poor	Remove structural member or barricade area from access.	Confirm structural member has been removed or that area has been barricaded from access.	1 year		
41	PBF.15	PBF Interior, Hanger supports on front half of boiler, boiler #11 (9th floor)	Photo shows the main steel girder that supports the front end of the boiler. 4 hanger rods attach to this girder. They have some surface rust but appear to be in good condition.	Good	Consider washing all support structurals to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Reinspect after boiler has been thoroughly washed. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
42	PBF.16	PBF Interior, boiler #11 (9th floor)	Close up photo of one of the hanger rod attachments shown in PBF.15. Some minor surface rust shown but appear to be in good condition.	Good	Consider washing all support structurals to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Reinspect after boiler has been thoroughly washed. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
43	PBF.17	PBF Interior, Hanger supports on front half of boiler, boiler #11 (9th floor)	Visual observations identified surface rust on the hanger rods in this location.	Fair	Consider washing all support structurals to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
44	PBF.18	PBF Interior, Boiler #11 (9th Floor)	Spot measurements taken on accessible hanger rods. Photo shows rod thickness approx. ~1 7/16" diameter on northern side of Boiler #13, analogous to 1.5" dia. rods on Section 4-4 of sample Boiler technical drawings	Fair	Consider washing all support structurals to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
45	PBF.19	PBF Interior, Boiler #11 (9th Floor)	Spot measurements taken on accessible hanger rods. Photo shows rod thickness approx. ~1 7/16" diameter on northern side of Boiler #13, analogous to 1.5" dia. rods on Section 4-4 of sample Boiler technical drawings	Fair	Consider washing all support structurals to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
46	PBF.20	PBF Interior, Boiler #11 (9th Floor)	The majority of the surface rusting observed appeared to be on the north side of Boiler #13 near the opening in the roof in the NE corner. This photos shows the rust on the hanger rod on the left compared to the one of the right that is better shielded inside the boiler penthouse.	Fair	Consider washing all support structures to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
47	PBF.21	PBF Interior, Hanger supports for steam drum, boiler #11 (9th floor)	Nuts at the top of the hanger rods that support the steam drum appear to be sufficiently intact; though presence of ash/dirt make it difficult to fully observe.	Good	Consider washing all support structures to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
48	PBF.22	PBF Interior, Hanger supports for steam drum, boiler #12 (9th floor)	Nuts at the top of the hanger rods that support the steam drum appear to be sufficiently intact with minimal surface rust.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
49	PBF.23	PBF Interior, Boiler Penthouse, boiler #12 (9th floor)	Interior of boiler penthouse and boiler in general appears to have less surface rust.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		

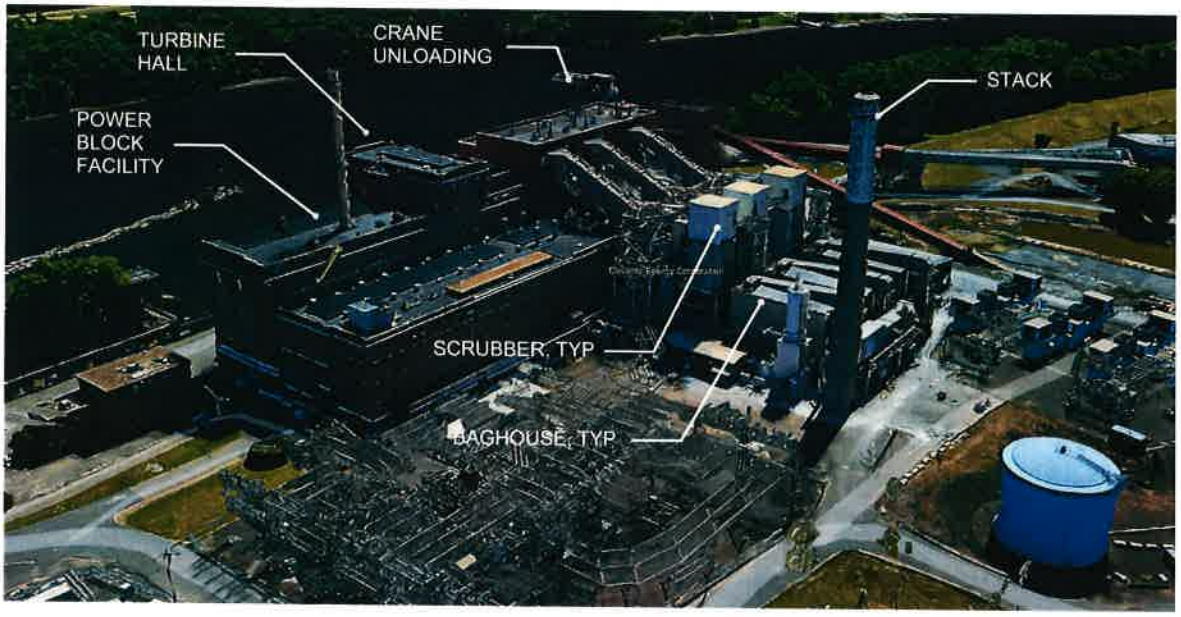
Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
50	PBF.24	PBF Interior, Hanger rods, boiler #12 (9th floor)	Spot measurements taken on accessible hanger rods. Photo shows rod thickness approx. ~1 7/16" diameter on northern side of Boiler #13, analogous to 1.5" dia. rods on Section 4-4 of sample Boiler technical drawings	Fair	Consider washing all support structures to provide better visual observation.	Document current condition with photographs and compare to originally observed condition. Visually observe exposed boiler hanger supports for signs of signs of deformation or excessive corrosion and perform thickness checks to document any material loss.	1 year		
51	PBF.25	PBF Interior, Hanger rods, boiler #12 (9th floor)	Photo shows hanger rod attachment points on top side of steel girders. Nuts appear to be in good condition.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
52	PBF.26	PBF Interior, Hanger rods, boiler #12 (9th floor)	Photo shows hanger rod attachment points on top side of steel girders. Nuts appear to be in good condition.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
53	PBF.27	PBF Interior, Hanger rods, boiler #13 (9th floor)	2" diameter U-rods supporting the superheater piping in good visual condition	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
54	PBF.28	PBF Interior, Hanger rods, boiler #13 (9th floor)	2" diameter U-rods supporting the superheater piping in good visual condition	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
55	PBF.29	PBF interior, 9th floor, SE end of building	Deflection of grating was measured over 1 inch	Poor	Barricade walkway to avoid acces to avoid loading on walkway. Consider replacing or resecuring walkway grating.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless repairs have been made.	1 year		
56	PBF.30	PBF interior, Boiler room, (9th floor)	Deflection of grating was measured over 1 inch	Poor	Barricade walkway to avoid acces to avoid loading on walkway. Consider replacing or resecuring walkway grating.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless repairs have been made.	1 year		
57	PBF.31	PBF interior, Boiler room (9th Floor)	Lagging and insulation is broken off and hanging. Potential falling item hazard. Building siding is missing exposing interior to rain/snow.	Critical	Barricade area and prevent access to areas underneath falling object hazards. Consider removing loose and fallen paneling and seal the building (see photo PBF.6 and PBF.7) from rain/wind.	Document current condition with photographs and compare to originally observed condition. Confirm necessary areas are still appropriately barricaded from access and/or hazards have been removed. Confirm building siding has been repaired to seal the building from rain/snow.	6 months		
58	PBF.32	PBF interior, 8th floor	A light fixture has partially fallen and hangs across the walkway at head height which poses an eye poke/head collision hazard.	Critical	Remove or repair light fixture.	Document current condition with photographs and compare to originally observed condition. Confirm hazard has been removed.	6 months		
59	PBF.33	PBF interior, 8th floor	Guardrails are missing and/or deteriorated which poses a fall safety hazard.	Critical	Barricade area to avoid access. Consider replacing guardrail.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless repairs have been made.	6 months		
60	PBF.34	PBF interior, 7th floor by elevator	Economizer hopper lagging and insulation has broken off and hanging loose. Potential falling item hazard.	Critical	Remove lagging and insulation. Prevent access to area underneath until hazard is removed.	Document current condition with photographs and compare to originally observed condition. Confirm area is still appropriately barricaded unless hazard has been removed.	6 months		
61	PBF.35	PBF interior, ground floor and basement on east side end of building	Cracks and exposed corroded rebar observed on some of the concrete encasements around the vertical steel structural I-beams.	Fair	None.	Document current condition with photographs and compare to originally observed condition. Monitor crack width and exposed rebar thickness over time.	1 year		
62	PBF.36	PBF interior, ground floor and basement on east side end of building	Cracks and exposed corroded rebar is indicative of long term structural damage	Fair	None.	Document current condition with photographs and compare to originally observed condition. Monitor crack width and exposed rebar thickness over time.	1 year		
63	PBF.37	Hopper room underneath 1200 lb limit concrete pad, basement floor	Room is completely flooded, steel framing once used for hopper is completely rusted. Concrete beams on ceiling, and presumably below the concrete pad appears to have mild structural damage.	Fair	Drain water from room for further investigation to verify structure is sound.	Document current condition with photographs and compare to originally observed condition. Drain and inspect structure to verify soundness of steel/concrete structure	1 year		

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
64	BH11.A, BH11.B, BH11.C, BH11.D, BH11.J, BH11.K, BH11.T, BH11.U, BH12.J, BH12.K, BH12.P, BH12.Q, BH12.U, BH12.V	Block 11, footings A, B, C, D, J, K, T, U; Block 12, footings J, K, P, Q, U, V	Layer of dirt/ash & minimal rust has settled upon steel surface, but otherwise little-to-no structural damage, connection assembly intact	Good	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
65	BH11.Q, BH13.J, BH13.K, BH13.L	Block 11, footing Q; Block 13, footings J, K, L	Layer of dirt/ash & minimal rust has settled upon steel surface, but otherwise little-to-no structural damage, connection assembly intact	Good	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
66	BH12.A, BH12.B, BH12.T, BH12.Y, BH13.I, BH13.O, BH13.P	Block 12, footings A, B, T, Y; Block 13, footings I, O, P	Brace has been cut away & column is unbraced against lateral load, superficial rust observed affecting paint coating but does not appear to have caused material loss in steel	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
67	BH11.I, BH11.P, BH11.S, BH12.S, BH12.X, BH13.D, BH13.F, BH13.M, BH13.N, BH13.Q, BH13.R, BH13.S, BH13.T, BH13.U	Block 11, footings I, P, S; Block 12, footings S, X; Block 13, footings D, F, M, N, Q, R, S, T, U	Light rust has superficially pock-marked steel surface	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
68	BH11.F, BH11.L, BH12.I, BH12.R, BH13.V	Block 11, footings F, L; Block 12, footings I, R; Block 13, footing V	Moderate corrosion observed on various components of connection	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
69	BH11.G	Block 11, footing G	Light rust has superficially pock-marked steel surface	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
70	BH11.R, BH11.X, BH12.F, BH12.G, BH12.L, BH12.M, BH12.N, BH13.E	Block 11, footings R, X; Block 12, footings F, G, L, M, N; Block 13, footing E	Moderate corrosion observed on various components of connection	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
71	BH11.V, BH11.W, BH11.Y, BH11.BB, BH12.H, BH12.W	Block 11, footings V, W, Y, BB; Block 12, footings H, W	Severe corrosion observed on various components of connection with material loss observed	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
72	BH11.Z, BH13.C, BH13.G, BH13.X	Block 11, footing Z; Block 13, footings C, G, X	Severe corrosion observed on various components of connection with material loss observed	Fair	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		

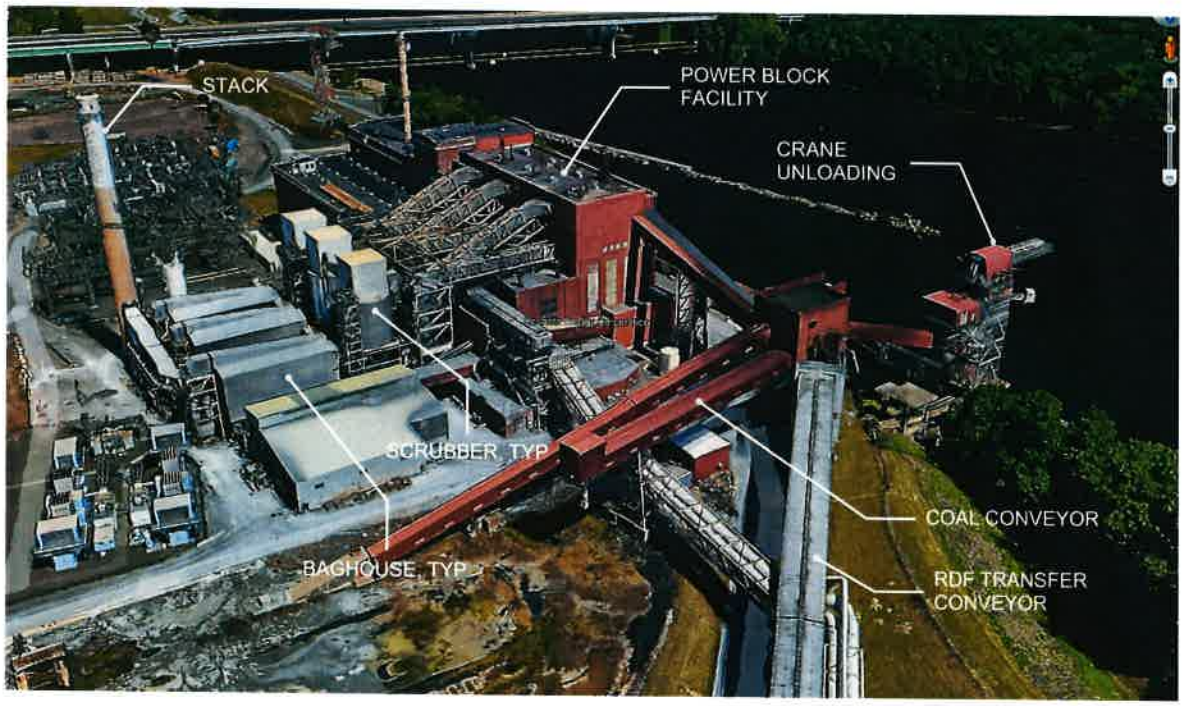
Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
73	BH11.E, BH11.M, BH11.N, BH11.O, BH12.C, BH12.D, BH12.O, BH12.BB, BH13.A, BH13.B	Block 11, footings E, M, N, O; Block 12, footings C, D, O, BB; Block 13, footings A, B	Severe corrosion observed on various components of connection with material loss observed	Poor	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
74	BH11.AA, BH12.AA, BH13.H, BH13.Y	Block 11, footing AA; Block 12, footing AA; Block 13, footings H, Y	Severe corrosion observed on various components of connection with material loss observed	Poor	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		
75	BH11.H, BH12.E, BH12.Z, BH13.W, BH13.Z, BH13.AA, BH13.BB	Block 11, footing H; Block 12, footings E, Z; Block 13, footings W, Z, AA, BB	Severe corrosion observed on various components of connection with material loss observed	Poor	None.	Compare photographic evidence to monitor progression of corrosion.	1 year		

Checklist Item #	Photo #	Location	Inspection Findings (4Q-2024)	Rating (Excellent, Good, Fair, Poor, Critical)	Immediate action	Ongoing Inspection Requirements	Ongoing Inspection Frequency	Reinspection: New Rating	Date of Reinspection
76	D.01	Stack Service Ladder	The service ladder and pipe attached to the outside of the stack are severely rusted. Attachment points are still intact, but severe rust may have compromised their structural integrity.	Poor	Tape off the ground entrance to the service ladder. Do not permit anyone to climb ladder without appropriate safety measures in place.	Document current condition with photographs and compare to originally observed condition to determine if attachment points are still intact, or if rust/deterioration has caused them to separate from the concrete exterior.	1 year		
77	D.02	Stack Capping/Flashing	Stack Cap/flashing appears to be in good condition with no loose pieces of metal observed.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
78	D.03	Pebble Lime Silo	Roof hatch appears secure. Hoses left over on top of silo.	Good	None.	Document current condition with photographs and compare to originally observed condition.	1 year		
79	D.04	Ash Loadout Building	Section of Ash Loadout Building roof has caved in.	Critical	Barricade - scheduled for demolition in Closure Plan	Document current condition with photographs and compare to originally observed condition.	6 months or after severe windstorms of 70mph gusts or higher		
80	D.05	Scrubber Penthouse	Scrubber Penthouses appear to be in great condition	Good	Nons.	Document current condition with photographs and compare to originally observed condition.	1 year		
81	D.06	Baghouse 12 - rooftop	The sheetmetal roof of Baghouse 12 has peeled away near the scrubbers. There is potential for the roof to blow off in a severe windstorm.	Poor	Monitor the roof condition. Tape off area immediately below the roof to prevent injury from falling debris to persons below	Inspect once every six months, as well as after severe windstorms and/or rainstorms	6 months or after severe windstorms of 70mph gusts or higher		
82	D.07	Wall immediately above conveyor exiting from boiler 12	Exterior wall shows apparent weather damage above conveyor 12 similar to that causing rupture openings above conveyors 11 and 13.	Fair	Monitor the wall condition	Inspect once every six months, as well as after severe windstorms and/or rainstorms	6 months or after severe windstorms of 70mph gusts or higher		
83	D.08	Chimney above northeast end of PBF	Seemingly minor but extensive surface cracks within one of the smokestacks atop the PBF	Fair	None.	Inspect once every six months. If cracks become more extensive and/or appear to widen, conduct Non-Destructive Testing to determine if structural integrity is weakening	1 year		
84	D.09	Southwest end of PBF	Significant cracking in the parapets and in the walls of the rooftop penthouse	Fair	Monitor parapets and concrete trim for spalling leading to falling debris	Inspect once per year	6 months or after severe windstorms of 70mph gusts or higher		
85	D.10	Screenhouse #2	The middle screenhouse has several broken windows, cracks in the exterior façade, and a large gaping hole in the roof	Poor	N/A	Inspect once every six months. With proper fall protection and safety harnessing, investigate building interior for signs of water damage (esp. right next to riverside), molds, interior vegetation, and foundation deterioration	6 months		
86	D.11	Northwest end of PBF	Parapet & exterior wall are crumbling, leaning, and separating from main structure	Poor	If facade shows signs of imminent collapse, tape off area immediately	Inspect once every six months, as well as after severe windstorms and/or rainstorms. If facade shows signs of buckling and imminent collapse, tape off immediately	6 months or after severe windstorms of 70mph gusts or higher		
87	D.12	Northwest end of PBF	Parapet & exterior wall are crumbling and separating from main structure. Bricks are loosening from the main façade, indicating potentially serious structural issues	Poor	If facade shows signs of imminent collapse, tape off area immediately	Inspect once every six months, as well as after severe windstorms and/or rainstorms. If facade shows signs of buckling and imminent collapse, tape off immediately	6 months or after severe windstorms of 70mph gusts or higher		
88	D.13	Northeast end of PBF	Significant cracking between individual bricks (above windows and concrete trimming), further indicating wall is separating from main structure (somewhat difficult to see due to lighting)	Fair	N/A	Inspect once every six months, as well as after severe windstorms and/or rainstorms. If facade shows signs of buckling and imminent collapse, tape off immediately	6 months or after severe windstorms of 70mph gusts or higher		
89	D.14	Northeast end of PBF (below windows)	Severe cracking of concrete trim at the northeast end of the PBF, significant risk of falling debris	Fair	N/A	Inspect once every six months. If cracks continue to widen, consider taping off the immediate area to prevent injury from falling debris to persons on ground below	6 months or after severe windstorms of 70mph gusts or higher		

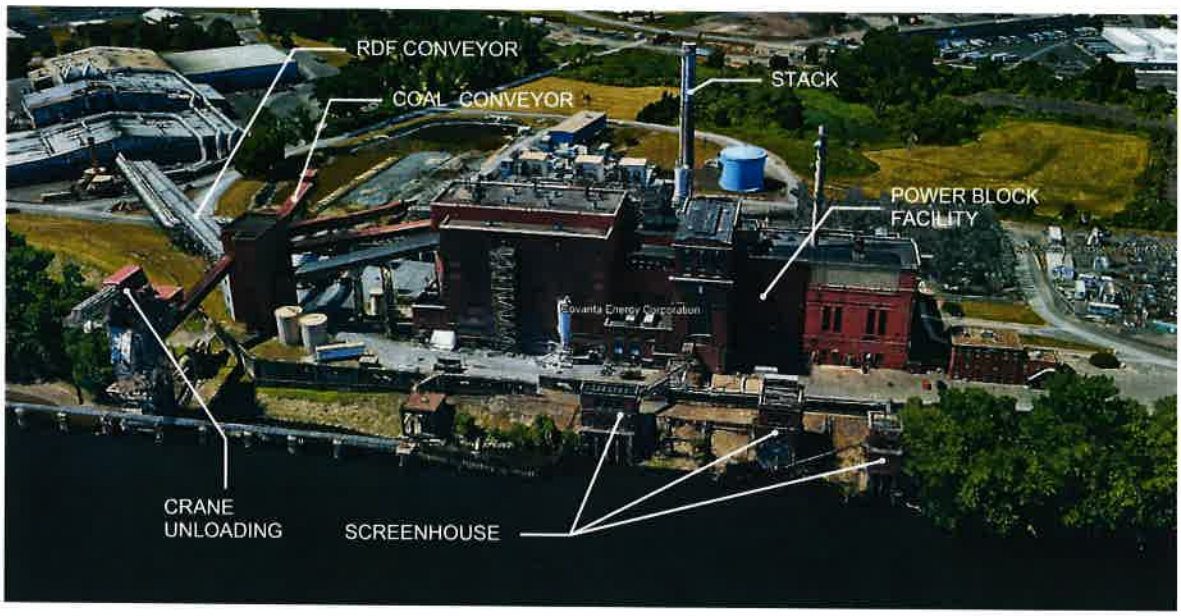
MIRA SITE PLAN AND ORIENTATION



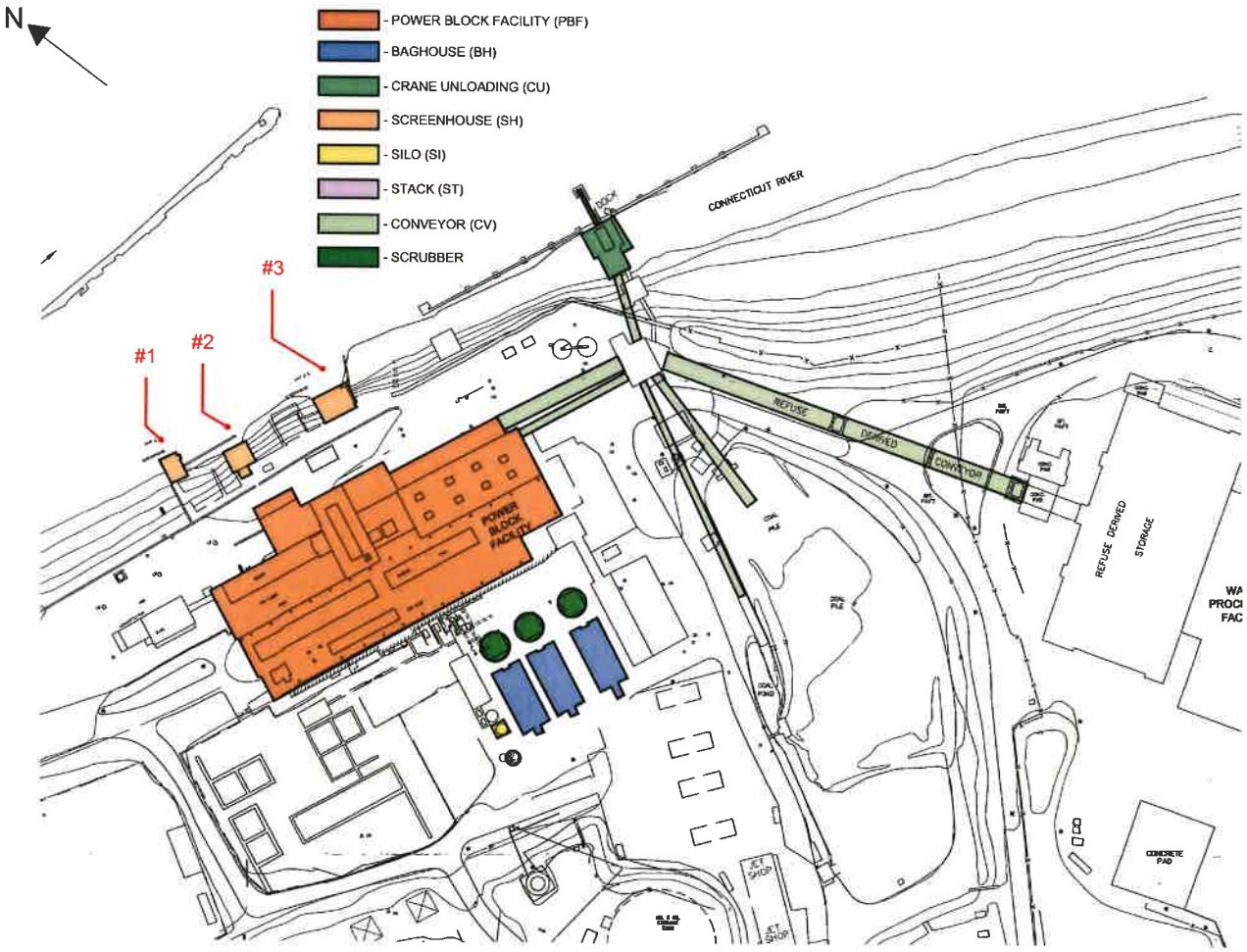
View of campus from northwest corner looking southeast



View of campus from southwest corner looking northeast



View of campus from east looking west



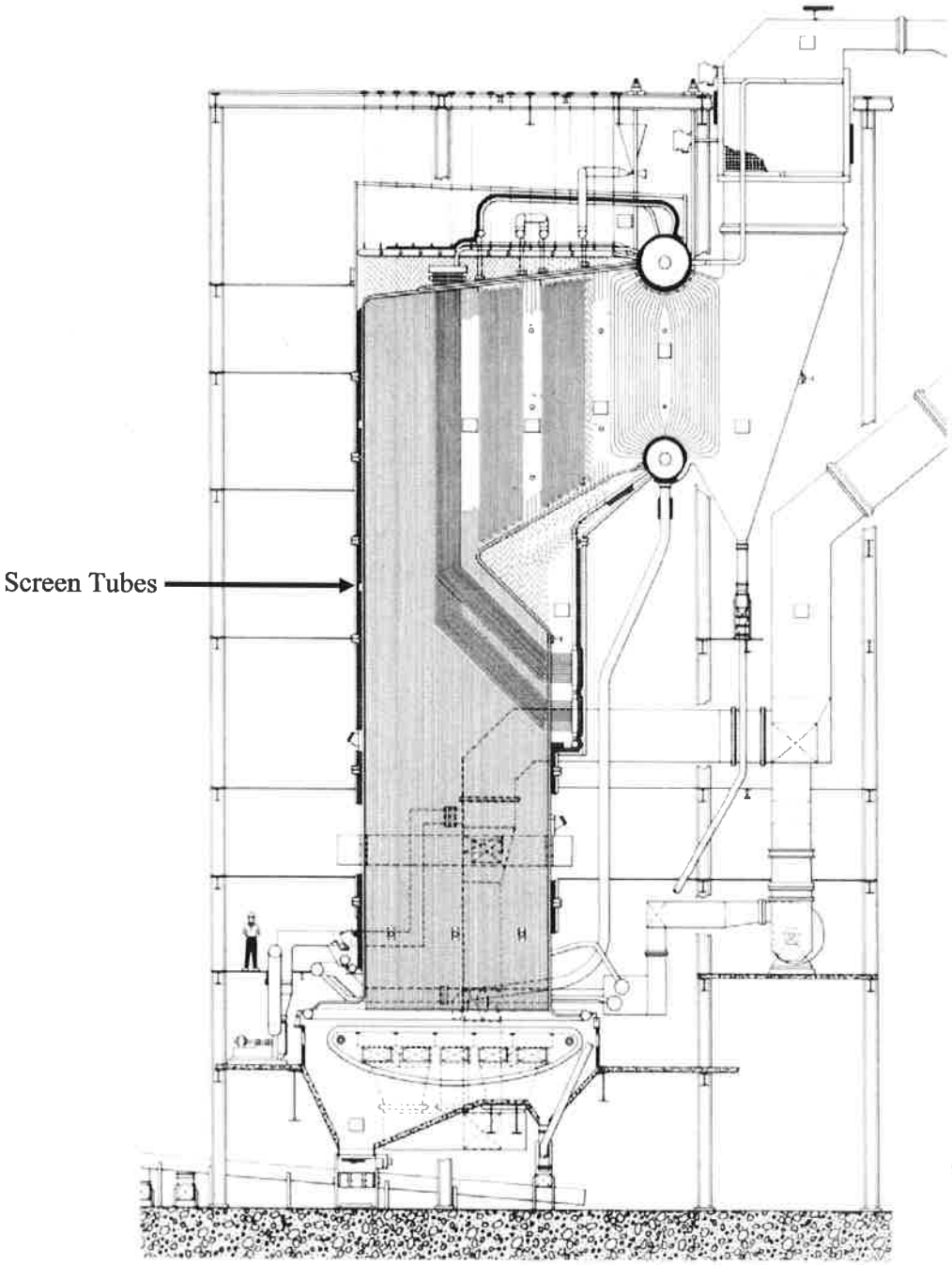
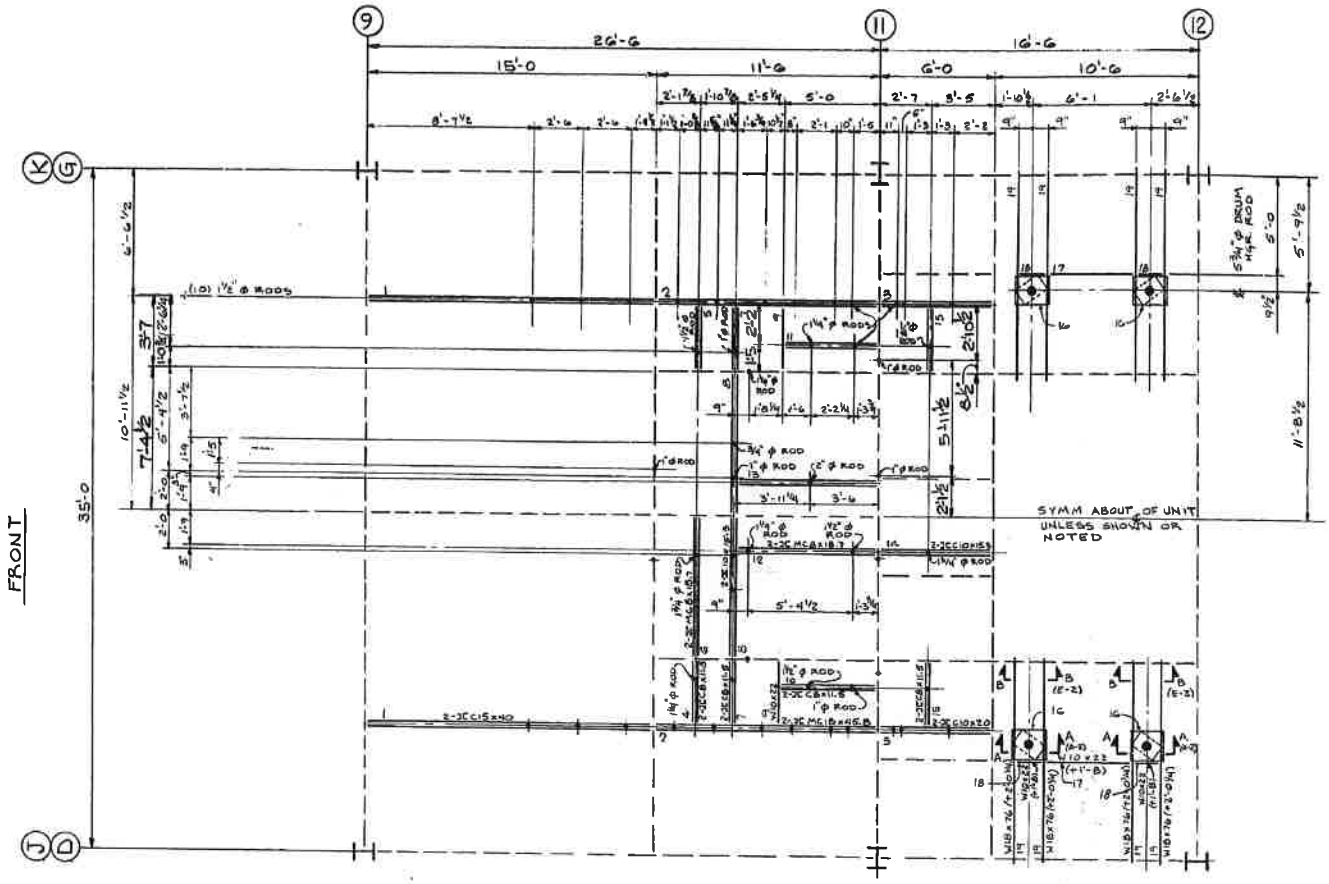


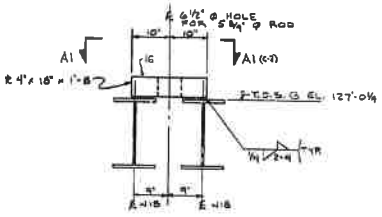
Figure 1. Pictorial arrangement of the CRRA-type VU-40 boilers.

BOILER HANGER PLAN AND SECTIONS

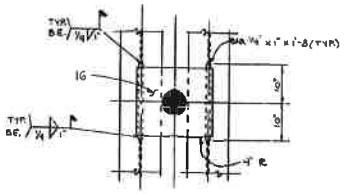
BOILER PLAN VIEW AT HANGER SUPPORT LEVEL
(DIAGRAMATIC)



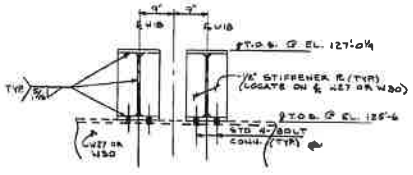
PRESSURE PART SUPPORT LEVEL



SECTION A-A (B,E-5)
SCALE: 1"=1'-0

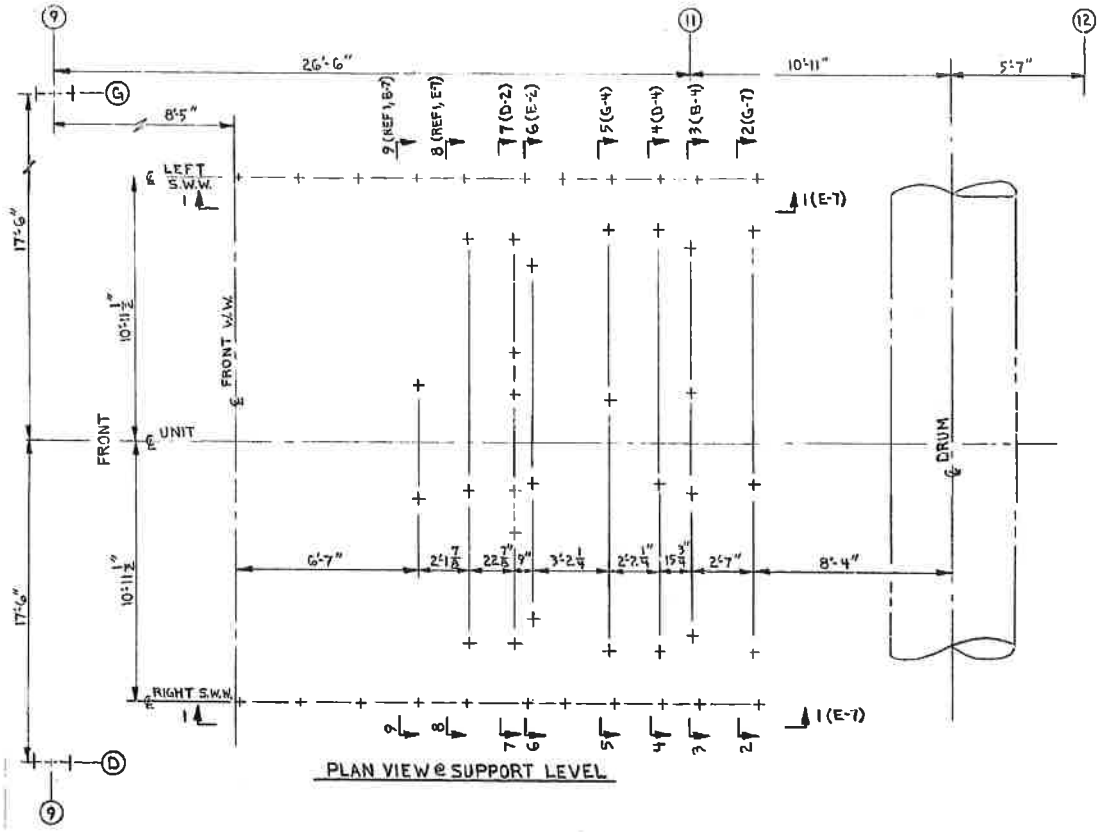


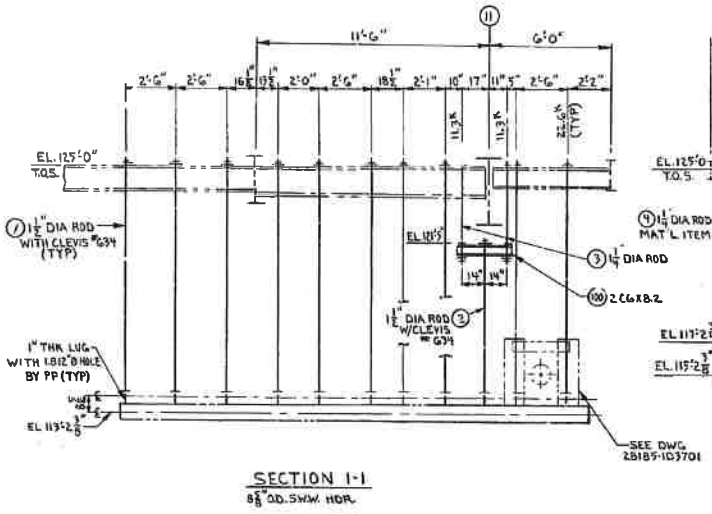
SECTION A1-A1 (A-3)
SCALE: 1"=1'-0

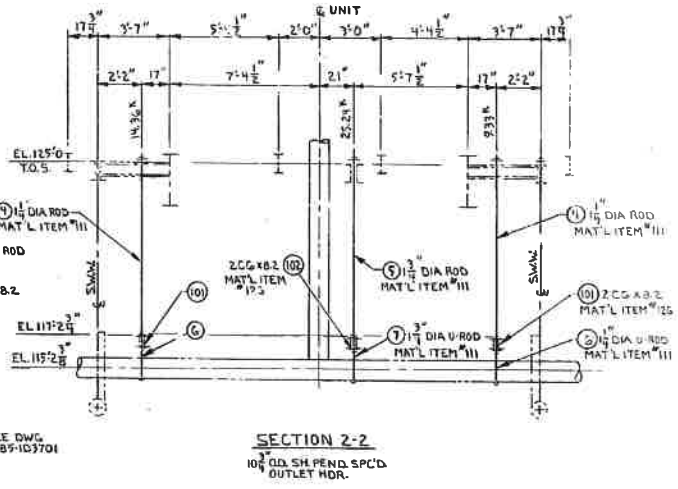


SECTION B-B (D,E-3)
SCALE: 1"=1'-0
TYP. BOTH ENDS

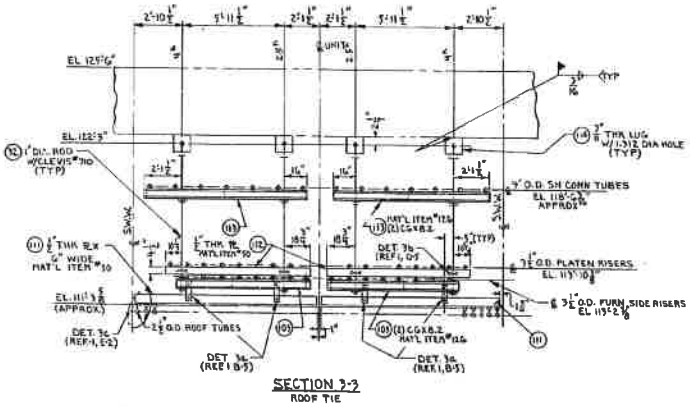
BOILER PLAN VIEW AT HANGER SUPPORT LEVEL WITH SECTIONS
(DIAGRAMATIC)

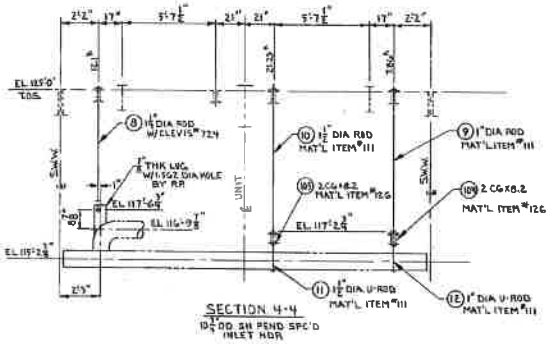


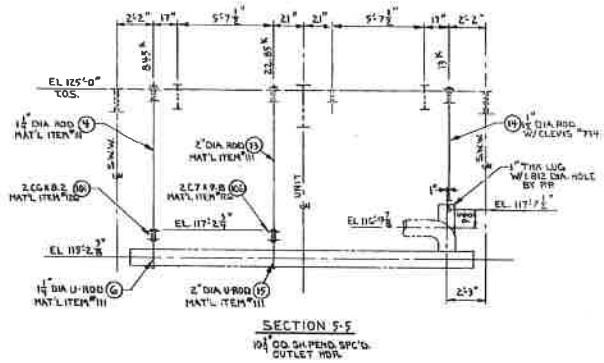


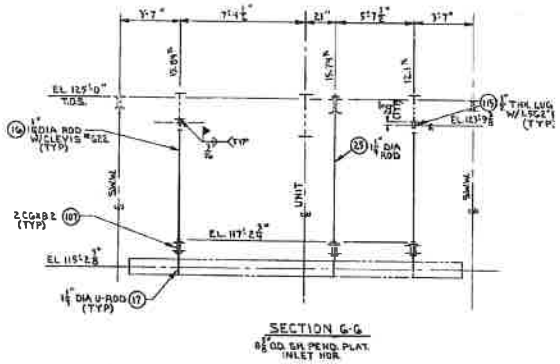


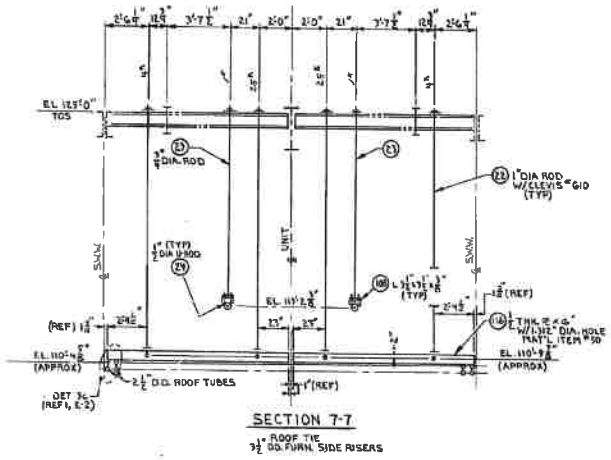
BOILER PLAN VIEW AT HANGER SUPPORT LEVEL WITH SECTIONS
(DIAGRAMATIC)



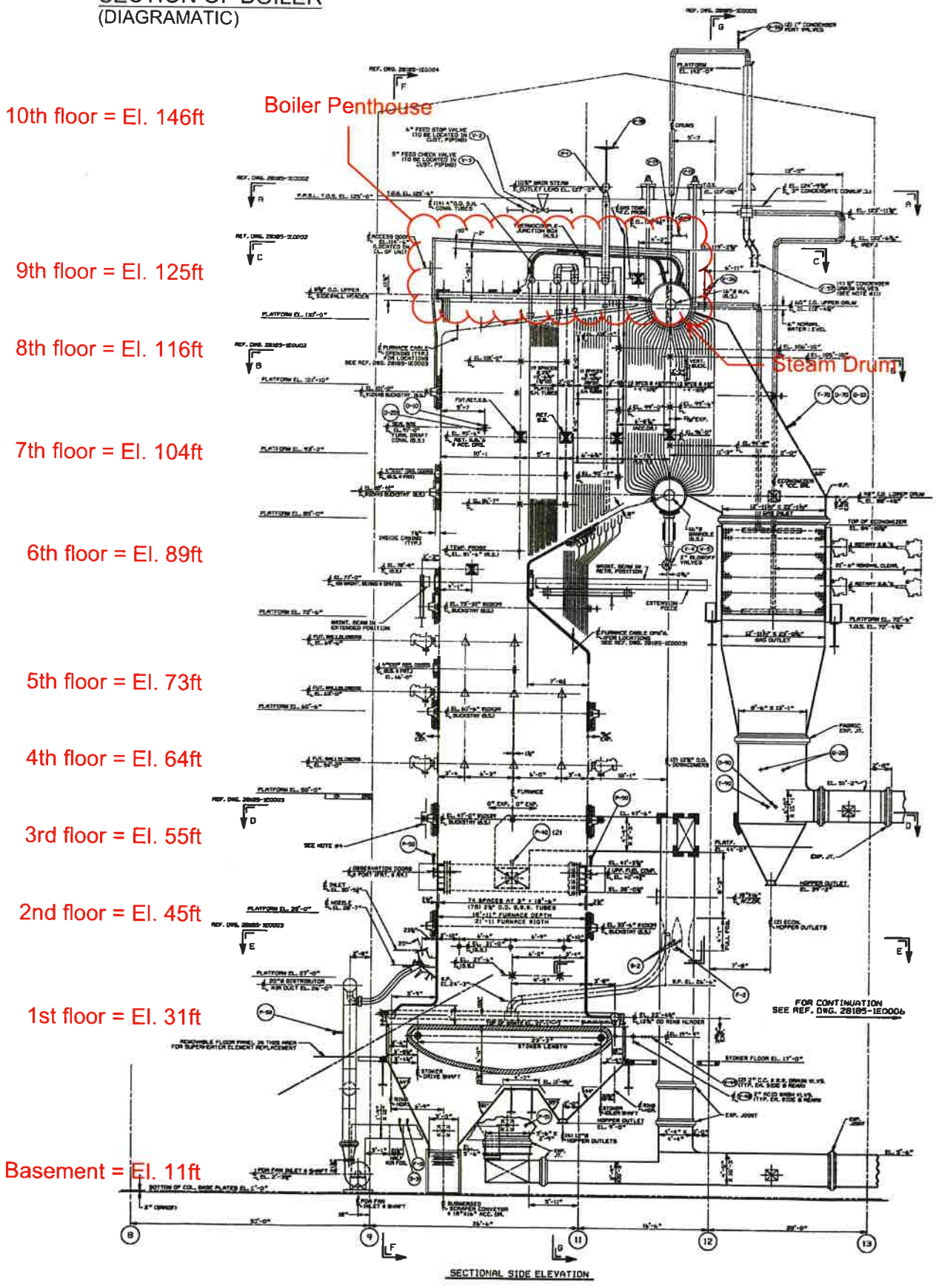




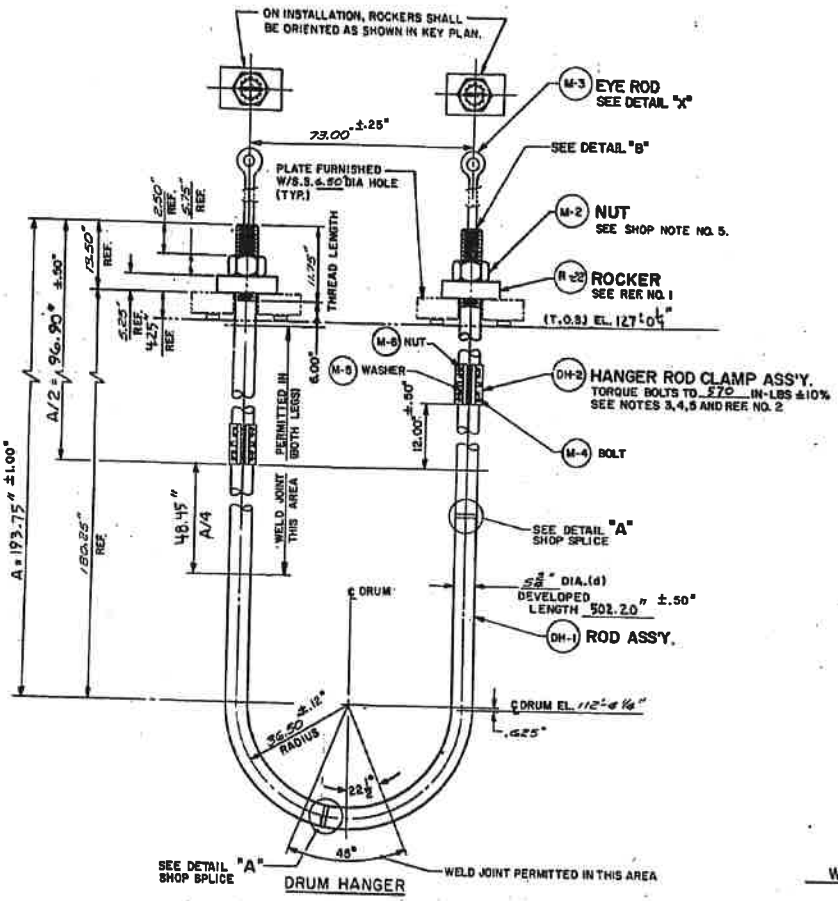


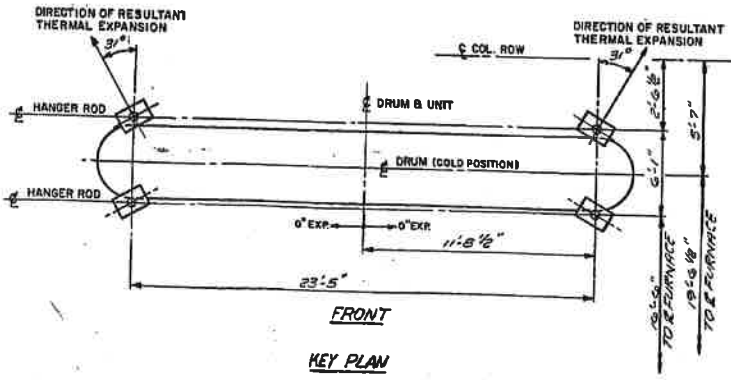


SECTION OF BOILER
(DIAGRAMATIC)



SECTION OF BOILER DRUM SUPPORT HANGER
(DIAGRAMATIC)



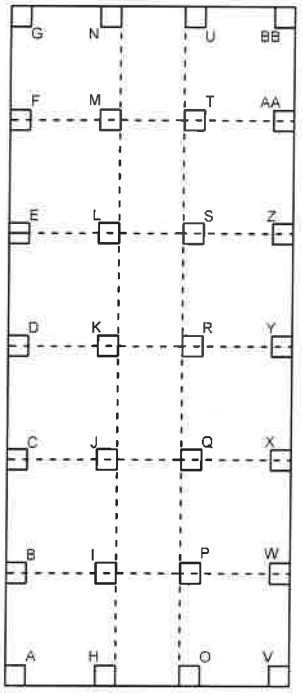


MILL TOLERANCES FOR ROD LENGTHS	ROD DIAMETER "d"	LENGTH +SEE BELOW -0				
		60.00" TO 120.00" EXCL.	120.00" TO 240.00" EXCL.	240.00" TO 360.00" EXCL.	360.00" TO 480.00" EXCL.	OVER 480.00"
	2.50" TO 5.00" INCL.	1.00"	1.50"	1.75"	2.25"	2.75"
	OVER 5.00" TO 8.00" INCL.	2.00"	2.50"	2.75"	3.00"	3.25"

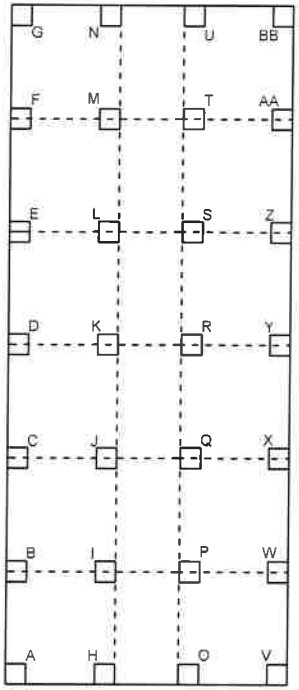
MIRA SKETCH LAYOUT OF BAGHOUSE FOOTINGS



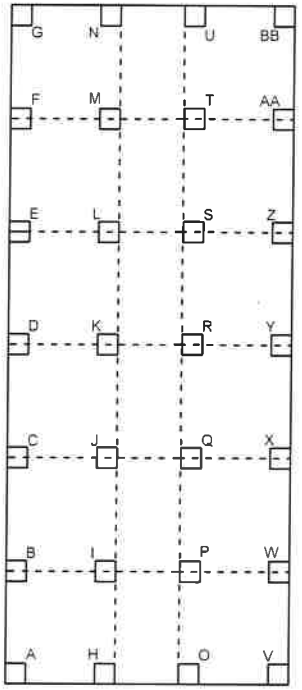
BAGHOUSE 11

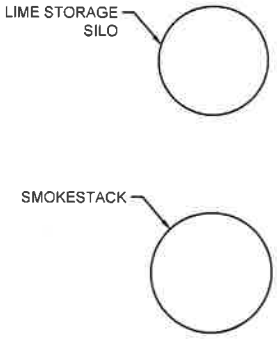


BAGHOUSE 12



BAGHOUSE 13





LAYOUT OF MIRA BAGHOUSES

EACH BAGHOUSE CONSISTS OF 12 HOPPERS WHICH ARE SUPPORTED BY 4 FOOTINGS EACH. THE FOOTINGS ARE ARRANGED AS SHOWN ABOVE. LOCATIONS "A" THROUGH "BB" FOR EACH BAGHOUSE ARE REFERENCED IN THE MIRA STRUCTURAL INSPECTION CHECKLISTS.

Attachment 6

ROUTINE FACILITY MAINTENANCE PLAN AT MIRA DA
SOUTH MEADOWS PROPERTY AND FACILITIES

Overview

The MIRA DA Routine Facility Maintenance Plan covers 80 acres of land, two thirds of which consists of the Power Block Facility (PBF) (norther portion off of Reserve Road) at which there is a shuttered electrical generating station, while the remaining one-third of the property (the southern portion along Maxim Road) is known as the Waste Processing Facility (WPF), which formerly processed municipal solid waste and is where MIRA's administrative offices are currently located.

The following tasks are included in the Routine Facility Maintenance Plan:

- Landscaping including, mowing trimming, weed control and Spring and Fall Clean-ups;
- Snow removal including salt and ice melt applications on administrative office sidewalks and sanding in interior roadways;
- Mechanical gate repairs and service for main entrance gate and interior gates;
- Perimeter Fence repair and replacement;
- Access doors repair and secure lock replacement as needed;
- Fire Protection Testing for Administrative Offices and WPF Warehouse;
- HVAC Maintenance Service and Repairs for Administrative Offices;
- Stack light FAA Maintenance;
- Scale Calibration and Cleaning;
- Janitorial Services and Supplies;
- Trash and Recycling removal;
- Vehicle Fleet Maintenance Service

Landscaping

MIRA DA issued a Purchase Order to Primary Landscaping LLC from Glastonbury, CT to provide landscaping services. Primary Landscaping submitted the lowest quote of the three companies that submitted pricing at MIRA's request. Their services include mowing and trimming of areas either one or two times per month as indicated on MIRA's landscaping map; trimming and weed whacking at internal gate areas and access to coal pond; weed treatment spraying around building, beds, parking lot area and fence lines and annual Fall and Spring Cleanups and other services as needed such as storm damage limb or tree removal. The landscaping map and Primary's initial pricing estimates and actual invoices are included in the folder.

Snow Removal

Primary Landscaping also submitted the lowest quote of the three companies that submitted pricing for snow removal and ice melt and salt applications and was issued a Purchase Order for this work. Primary is paid a per storm rate that is based on the number of inches of snow that falls. Primary is paid separate hourly rates for any additional work MIRA DA requests. Primary is required to submit verification of snow fall amounts for each day service was provided from a competent weather authority with their monthly invoices.

The scope of services and map of the properties describe the areas to be plowed and treated in three areas with the first area being the Administrative Office area. The second area is the loop around the WPF and two internal gates that lead to the PBF side. The third area is the east side loop of the PBF continuing to Gate 20. Throughout the three areas, all fire hydrants are required to be hand shoveled as well as entrances to offices, warehouses, jet shop and turbine hall. Please note that Eversource removes the snow from Gate 40 to their switchyards. Each of these areas and all hydrants must be cleared to ensure access to the Hartford Fire Department at all times.

Copies of the scope of services, plowing map, Primary's pricing sheet, monthly invoices and snowfall amount verification are included in the folder.

Mechanical Gate Service/Repair and Perimeter Fence Repair/Replacement

MIRA DA issued a purchase order to Frankson Fence Co. from North Haven to service and repair mechanical gates including the main gate 70 off of Maxim Road and internal gates that lead from the WPF side to the PBF side. Typical service and repair needs include drive chain disconnections and reinstallation, repair of bent shafts and gate adjustment and bearing replacement on main drive wheels. MIRA also utilizes the internal services of a contract employee to repair and adjust these gates when possible. Perimeter fences have been breached on the dike side by intruders trespassing on the PBF side. Perimeter fence repairs have been conducted by MIRA's contract employee.

WPF & PBF Access Doors Repair and Secure/Lock Replacement

Doors throughout the WPF and PBF need to be maintained and secured to prevent intruder access. MIRA DA issued a purchase order to Tull Bros. of Rocky Hill to repair and install new dead bolt locks and/or weld doors shut for security purposes. Tull Bros. repaired or adjusted doors as needed and installed new dead bolt locks on eighty access doors at both the WPF and PBF and their ancillary buildings. Doors that were no longer needed for ingress and egress were welded shut. Glass doors had wire mesh installed to prevent breaches and doors with windows had the glass covered with metal. Prior to site demolition, access door and window security monitoring is critical to deter intruders and avoid serious accidental injury and/or death.

Fire Protection Testing for Administrative Building and WPF Warehouse

MIRA DA's Headquarters and WPF warehouse are equipped with wet sprinkler systems that are heat activated. MIRA issued a purchase order to Fire Protection Testing from Cheshire CT to provide quarterly testing of those systems.

HVAC Maintenance Service and Repairs for Administrative Offices

MIRA DA uses Air Temp Mechanical Services from Berlin, CT under CT-DAS Contract No. #23PSX0243 for HVAC routine maintenance at the administrative offices located at 300 Maxim Road and for on-call troubleshooting response and repairs above and beyond routine maintenance.

Stack Lights FAA Maintenance

The two stacks at the PBF are at a height that requires 24/7 lighting due to our close proximity to Brainard Airport per FAA regulations. MIRA DA utilizes the services of SkyTec, Inc. from Windham, ME under a Purchase Order due to their special capabilities to repair and replace lighting fixtures as needed. MIRA DA requires our contracted security firm (United Security Inc.) personnel to document every evening that the stack lights are operating.

Scale Calibration and Cleaning

The automated scale located just southwest of the WPF's RDF hall has direct access to Gate 40 (Eversource Gate). This scale is critical for commerce purposes for both high value material or scrap metals that will be extracted during plant demolition activities. MIRA DA utilizes Metler Toledo under a purchase order for scale calibration and maintenance services to ensure that outbound weights are accurate for commerce. MIRA DA uses Transclean under a purchase order to clean underneath the scale prior to any major outbound activity to ensure weight accuracy.

Janitorial Services & Supplies

Subsequent to obtaining three prices, MIRA DA uses Charter Oak Building Maintenance Inc. for janitorial services under a purchase order. Charter Oak cleans the administrative offices Monday through Friday.

Trash and Recycling Removal

MIRA DA uses CWPM LLC per DAS Contract 23PSX0258 for bi-weekly trash and recycling removal.

Vehicle Fleet Maintenance Service

MIRA DA utilizes Firestone in Glastonbury for vehicle fleet maintenance and routine service under a purchase order after receiving three quotes. The vehicles are primarily used for MIRA's enforcement and scale operations team as well as the USI Security personnel for patrolling the PBF and WPF properties. MIRA's fleet of vehicles has substantially aged, and requires service, maintenance and repairs concomitant to the age of the vehicles.

SNOW REMOVAL AT MIRA FACILITIES LOCATED
AT 300 MAXIM ROAD AND 100 RESERVE ROAD, HARTFORD, CT

The MIRA Dissolution Authority is seeking prices for snow plowing (including salt and ice melt applications, hand shoveling of walks, office entrance and exits, warehouse overhead and man doors, and fire hydrants for the 2023-2024 winter season and 2 optional winter season for 2024-2025 and 2025-2026. The Facility to be plowed is composed of two adjoining properties (WPF and PBF) bordered by Maxim Road, Reserve Road, the Charter Oak Bridge and the flood control levee along the Connecticut River (map of areas to be plowed is attached). Specific areas within the property as described herein:

Note: where gates are described in this scope, these are slide gates. If there is an accumulating snow/ice event (or accumulation from multiple smaller events) that begins to inhibit the sliding of the gate to the side of the paved area, hand shoveling of that side area is required sufficient to allow for the uninhibited sliding of the gate.

Contact person is:
Al Jerome
(860) 250-1459 Cell
(860) 757-7711 Office
ajerome@ctmira.org

Area 1: Headquarters Office Area – Gate 70 (Orange Area of Attached Map)

- *Note: Headquarters staff typically arrive between 7am and 9am and leave between 3pm and 6pm. Services assume that staff can safely arrive and leave the office as minimally hindered by snow and ice as practicable*

- Required work in this area includes snow plowing and salt and ice melt applications at Gate 70 entrance, office parking lot, walks and office entrance (area shown in orange on attached map) to be completed by 6:30 AM.

- Access road between headquarters office and parts warehouse (also shown in orange on attached map) to be completed -including shoveling and salting entrances to parts warehouse and backdoor to headquarters offices- after finishing parking lot and main office entrance. Work in this area includes hand shoveling of hydrants (red dots as shown on attached map)

Area 2: Loop around remainder of WPF (Maxim Road side of property in pink on attached map)

Note: The WPF is no longer an active facility. Area is being maintained as secondary egress out of the headquarters area, to maintain access for fire equipment and emergency vehicle ingress/egress, and to support efforts to sell used equipment from the inactive facility.

- Snow plowing (no salt or ice melt applications unless specially requested) at Gate 50 entrance, and around perimeter loop (specified in pink on attached map). Provide double-wide pass around perimeter of buildings to ensure ingress/egress for fire/emergency vehicles.
- Snow plowing of two internal gate areas between WPF and PBF sides of the property
- Hand shoveling of hydrants in this area (see red dots on attached map).
- Includes clearing of area from southwest back entrance of offices to trash dumpster.

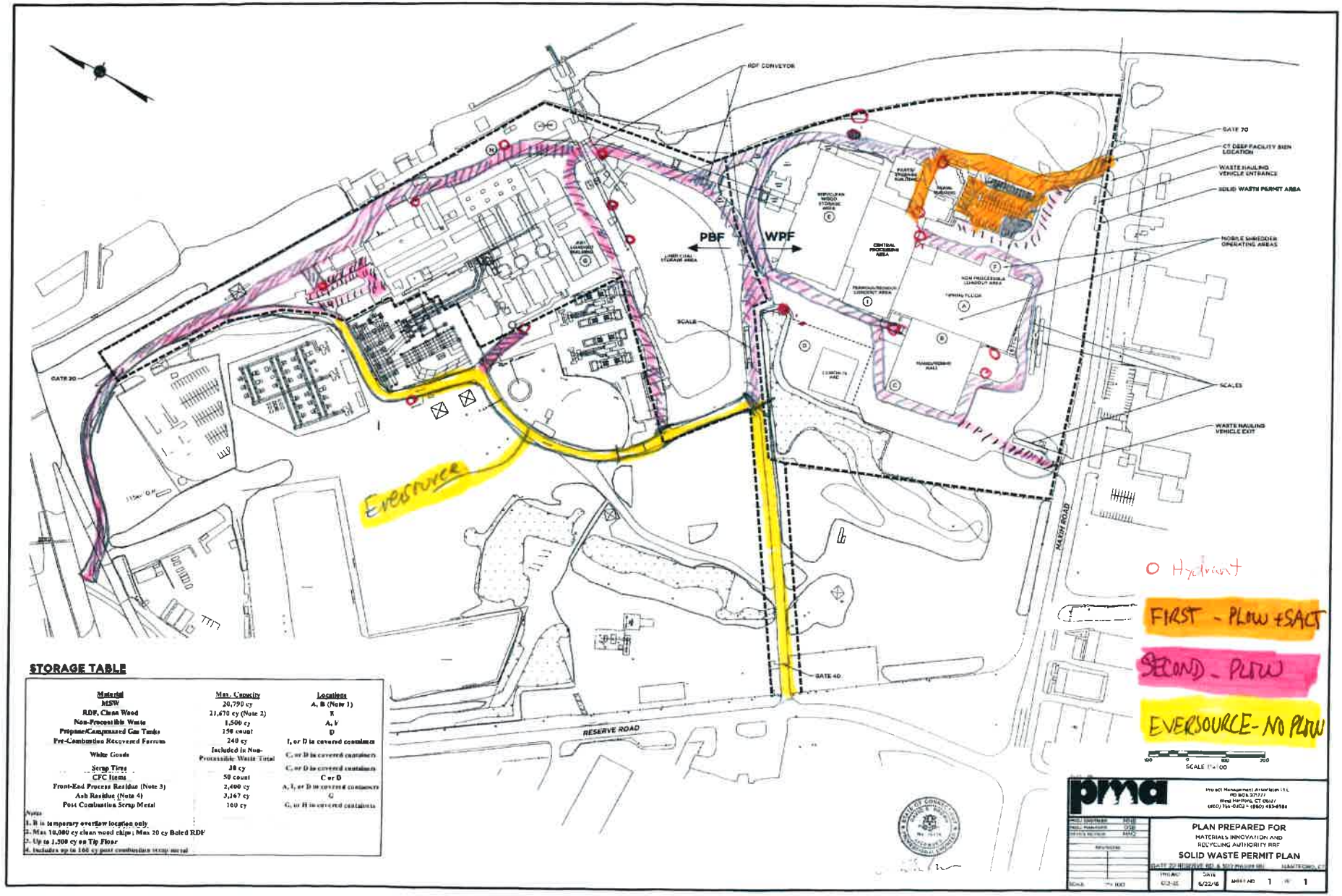
- Plowing of scale or shoveling at scale house only upon special request.

Area 3: PBF side

- Snow plowing of perimeter roads in area shown in pink on attached map including area through Gate 20 all the way to Reserve Road
- Hand shoveling of hydrants in this area
- Do NOT accumulate any snow near flood control chock-block area along concrete perimeter wall on Northeast side of property
- Minimize accumulation of snow near coal pond in center of property
- Hand shoveling of doorway to turbine hall on Northwest side of property, office parking lot, walks and entrance (area shown in orange on attached map).
- Hand shoveling of doorway to jet shop in center of property (near coal pond)
- Abuts Eversource plowing area (shown in yellow on attached map). Contractor may need to cross Eversource area on Southeast side of Coal Pond to continue perimeter loop around coal pond.

Area 4: Eversource Ingress/Egress Area (yellow area of attached map which abuts PBF area above)

- Not included in this quote. This section (in yellow on attached map) is maintained by Eversource as part of their property and/or egress area.


RDF CONVEYOR
GATE 70
CT DEEP FACILITY SIGN LOCATION
WASTE HAULING VEHICLE ENTRANCE
SOLID WASTE PERMIT AREA
MOBILE SHREDDER OPERATING AREAS
PBF
WPF
SCALES
WASTE HAULING VEHICLE EXIT
GATE 20
GATE 40
RESERVE ROAD
MARSH ROAD
Eversource
O Hydrant
FIRST - PLOW + SALT
SECOND - PLOW
EVERSOURCE - NO PLOW
SCALE 1"=100'
STORAGE TABLE
Material | Max. Capacity | Locations
MSW | 20,790 cy | A, B (Note 1)
RDF, Clean Wood | 21,670 cy (Note 2) | B
Non-Processible Waste | 1,500 cy | A, F
Propane/Compressed Gas Tanks | 150 count | D
Pre-Combustion Recovered Ferrous | 240 cy | I, or D in covered containers
White Goods | Included in Non-Processible Waste Total | C, or D in covered containers
Scrap Tires | 30 cy | C, or D in covered containers
CFC Items | 50 count | C or D
Front-End Process Residue (Note 3) | 2,400 cy | A, I, or D in covered containers
Ash Residue (Note 4) | 3,167 cy | G
Post Combustion Scrap Metal | 160 cy | G, or B in covered containers
Notes
1. B is temporary overflow location only
2. Max 10,080 cy clean wood chips ; Max 20 cy Baled RDF
3. Up to 1,500 cy on Tip Floor
4. Includes up to 160 cy post combustion scrap metal
pma
Project Management Association LLC
PO BOX 317777
West Hartford, CT 06117
(860) 764-0402 • (860) 463-9584
PLAN PREPARED FOR
MATERIALS INNOVATION AND RECYCLING AUTHORITY RRF
SOLID WASTE PERMIT PLAN
PROJECT 03-02
DATE 5/22/16
SHEET NO. 1 OF 1

Price Quote

Price quote to MIRA dissolution Authority for plowing and snow removal at 300 Maxim Road and 100 Reserve Road in Hartford, CT based on scope of work specified herein:

Prices to be quoted per storm in the following manner:

1" – 6" 995 per storm

7" – 10" 1395 per storm

11" – 14" 1695 per storm

Additional cost per inch over 14 inches 95.00 per inch

Hourly rate for additional authorized work while on site (e.g. additional salt and ice melt applications in region originally specified as not needed, additional snow removal in area originally specified as not needed, etc.): $ 65.00 per hour

Price for additional mobilization, if any (assumes additional work requested by MIRA requires contractor to come back to the site after leaving the South Meadows section of Hartford): $ 125.00

Protocol for Long-Duration and Imperfectly-timed storms

- Note: Base pricing page in this request assumes single storm event which is completed approximately by the start of the work day.
- In the box below, for ongoing persistent snow/ice storms that continue throughout the day or which due to their timing require a second clearing of snow and/or ice for the same snow/ice event, please specify your pricing protocol for such storms. (e.g. if there is a white out throughout the day, the total accumulation of which is 8" but which requires contractor to come back twice, once at the beginning of the day to clear 4" and once at the end of the day to clear 4", how would you expect to bill for that event. Would that constitute a single 8" storm, two 4" storms, or some other pricing structure? Please specify.

One 8 inch storm

* additional salt per app. if requested $175.00

* additional ice melt app. if requested $125.00

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
3/29/2025	2/27/2025	32174

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
10Winter Ser...	Snow Services 2/2/25 thru 2/3/25 3.1" storm	1	995.00	995.00
11Winter Ser...	Snow Services 2/6/25 1.0" storm	1	995.00	995.00
Salt	Salt application in parking lot due to refreeze ice conditions 2/6/25 PM	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/6/25 PM	1	125.00	125.00
12Winter Ser...	Snow Services 2/8/25 - 2/9/25 3.3" storm	1	995.00	995.00
13Winter Ser...	Snow Services 2/11/25 trace storm			
Salt	Salt application in parking lot	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks	1	125.00	125.00
Salt	Salt application in parking lot due to refreeze ice conditions 2/12/25 AM	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/12/25 AM	1	125.00	125.00
14Winter Ser...	Snow Services 2/12/25 PM 1.0" storm	1	995.00	995.00

Thank you for your business. Service charge of 1.5% on past due amounts.

Total

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
3/29/2025	2/27/2025	32174

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
Salt	Salt application in parking lot due to refreeze ice conditions 2/13/25 AM	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/13/25 AM	1	125.00	125.00
Salt	Salt application in parking lot due to refreeze ice conditions 2/13/25 PM	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/13/25 PM	1	125.00	125.00
Salt	Salt application in parking lot due to refreeze ice conditions 2/14/25	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/14/25	1	125.00	125.00
15Winter Ser...	Snow Services 2/15/25 thru 2/16/25 3.8" snow and sleet storm	1	995.00	995.00
Salt	Salt application in parking lot due to refreeze ice conditions 2/17/25	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks due to refreeze ice conditions 2/17/25	1	125.00	125.00

Thank you for your business. Service charge of 1.5% on past due amounts.

Total

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
3/29/2025	2/27/2025	32174

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due **$7,495.00**	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
Salt	Salt application in parking lot due to refreeze ice conditions 2/18/25	1	175.00	175.00
Salt	Salt application in rear area roadways and parking lots 2/18/25	1	245.00	245.00

Thank you for your business. Service charge of 1.5% on past due amounts.

Total $7,495.00

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
3/23/2025	2/21/2025	32131

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due **$2,440.00**	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
06Winter Ser...	Snow Services 1/6/25, Trace storm			
Salt	Salt application in parking lot	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks	1	125.00	125.00
07Winter Ser...	Snow Services 1/11/25 .5" storm			
Salt	Salt application in parking lot	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks	1	125.00	125.00
08Winter Ser...	Snow Services 1/16/25 trace to .1" storm			
Salt	Salt application in parking lot	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks	1	125.00	125.00
09Winter Ser...	Snow Services 01-19 thru 1-20-25 6.0" storm	1	995.00	995.00
Salt	Salt application in rear area roadways and parking lots 2025-01-21	1	245.00	245.00
Salt	Salt application in parking lot 1/28/25 due to slippery conditions	1	175.00	175.00
Ice Melt	Ice melt on sidewalks 1/28/25 due to slippery conditions	1	125.00	125.00

Thank you for your business. Service charge of 1.5% on past due amounts.

Total $2,440.00

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
2/22/2025	1/23/2025	32078

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due **$3,760.00**	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
01Winter Ser...	Snow Services 12/4 thru 12/5/24, 2.3" storm	1	995.00	995.00
Salt	Salt application in parking lot due to refreeze icy conditions 12/6/24	1	175.00	175.00
Ice Melt	Ice melt on sidewalks due to refreeze icy conditions 12/6/24	1	125.00	125.00
03Winter Ser...	Snow Services 12/16/24, 1.2" storm	1	995.00	995.00
04Winter Ser...	Snow Services 12/20 thru 12/21/24, 1.2" Storm	1	995.00	995.00
05Winter Ser...	Snow Services 12/24/24, .3" Storm			
Salt	Salt application in parking lot	1	175.00	175.00
Ice Melt	Ice Melt Application on sidewalks	1	125.00	125.00
Salt	Salt application in parking lot due to refreeze icy conditions 12/27/24	1	175.00	175.00

Thank you for your business. Service charge of 1.5% on past due amounts.

Total $3,760.00

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com



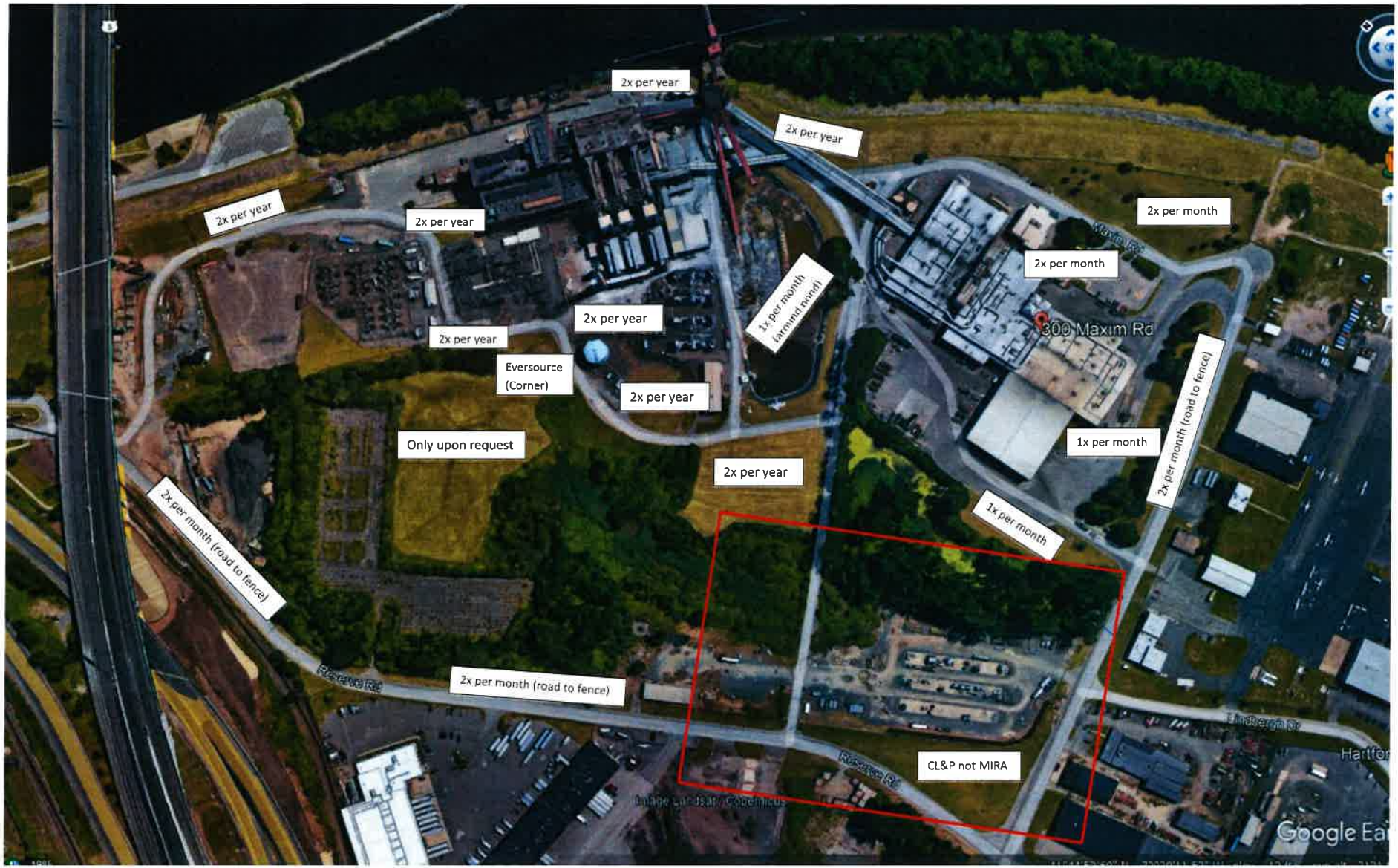
"Connecticut's Weather Authority"

CONNECTICUT SNOW ACCUMULATIONS FOR: December 4-5, 2024

SNOWFALL AMOUNTS ARE MEASURED IN INCHES

Ansonia	1.7	Hartford	2.3	Sandy Hook	3.2
Avon	4.8	Kensington	3.4	Seymour	3.2
Beacon Falls	3.2	Kent	3.8	Sharon	4.6
Berlin	3.1	Killingly	3.0	Shelton	1.8
Bethany	3.1	Litchfield	5.4	Sherman	3.5
Bethel	3.1	Madison	0.3	Simsbury	4.6
Bloomfield	3.1	Manchester	3.2	Somers	5.3
Branford	0.5	Mansfield	4.3	South Windsor	3.4
Bridgeport-North	1.1	Marlborough	3.2	Southbury	3.3
Bridgeport-South	0.3	Meriden	1.5	Southington	3.4
Bristol	5.4	Middlebury	3.3	Southport	0.5
Brookfield	3.3	Middlefield	1.1	Stamford	0.6
Brooklyn	4.7	Middletown	2.1	Storrs	4.3
Canton	5.5	Milford	0.2	Stratford	0.5
Cheshire	2.8	Monroe	3.0	Suffield	5.0
Chester	0.6	Naugatuck	3.3	Terryville	4.8
Clinton	0.3	New Britain	3.7	Thomaston	5.7
Colchester	3.3	New Canaan	0.9	Tolland	4.4
Coventry	4.5	New Fairfield	3.5	Torrington	5.4
Cromwell	2.5	New Hartford	6.2	Trumbull	1.6
Danbury	3.5	New Haven	0.2	Vernon	4.1
Darien	0.2	New Milford	3.8	Wallingford	1.5
Derby	2.3	Newington	3.1	Washington	4.8
Durham	0.5	Newtown	3.1	Waterbury	3.8
East Granby	4.1	Norfolk	5.6	Waterford	0.7
East Hampton	2.4	North Branford	0.7	Watertown	4.4
East Hartford	2.5	North Haven	1.1	West Hartford	3.5
East Haven	0.2	Norwalk	1.1	West Haven	0.4
East Windsor	3.6	Norwich	3.1	Westbrook	0.5
Easton	2.8	Old Lyme	0.5	Weston	2.1
Enfield	3.4	Old Saybrook	0.5	Westport	1.4
Essex	0.5	Orange	1.2	Wethersfield	2.8
Fairfield	0.8	Oxford	3.1	Willimantic	4.2
Farmington	4.1	Plainville	3.8	Willington	5.2
Gaylordsville	4.1	Plainfield	3.1	Wilton	1.9
Glastonbury	3.3	Pomfret	5.1	Winchester	6.0
Granby	5.5	Portland	2.6	Windsor	3.5
Greenwich	0.1	Prospect	3.3	Windsor Locks	3.9
Groton	T	Putnam	4.1	Winsted	6.1
Guilford	T	Redding	2.8	Wolcott	4.0
Hamden	3.0	Ridgefield	3.2	Woodbridge	2.1
		Rocky Hill	2.9	Woodbury	3.7

www.ctweather.com weatherlab@ctweather.com
18 Woodside Avenue, Danbury, CT. 06810-7123 ~ 203-730-2899 ~ Fax 203-730-2839


2x per year
2x per year
2x per year
2x per year
2x per year
2x per year
2x per year
2x per month
2x per month
1x per month (around pond)
300 Maxim Rd
Eversource (Corner)
Only upon request
1x per month
2x per month (road to fence)
2x per year
1x per month
2x per month (road to fence)
2x per month (road to fence)
CL&P not MIRA
Google Ea


MIRA
Spring/Fall cleanups
Legend
Spring/Fall cleanip
Maxim Rd
300 Maxim Rd
MIRA
Maxim Rd
Maxim Rd
Royal Charter Composite Squadron
Connecticut River
Google Earth
900 ft
N

Primary landscaping, LLC
P.O. Box 543
Glastonbury, CT 06033

Estimate

Date	Estimate #
7/18/2023	1279

Name / Address	Ship To
MIRA 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114

Project	Address/Lot#

Description	Qty	Cost	Total
Mowing of areas identified on map as 2x per month, price is per cut	1	400.00	400.00
Mowing of areas identified on map as 1x per month, price is per cut	1	400.00	400.00
Additional mowing of cold pond area if requested, while on site	1	95.00	95.00
Additional mowing of cold pond area if requested, off day, not on site	1	175.00	175.00
Trim and weed whack two gate areas for access to pond, 1x per month	1	90.00	90.00
Mowing of areas identified on map as 2x per year, price is per cut	1	1,100.00	1,100.00
Spring Clean-up, prepare property for season by removing leaves and debris from lawn area, attached map. Price is per visit.	1	1,200.00	1,200.00

Thank you for the opportunity to quote this project; we look forward to working with you.

Total

Primary landscaping, LLC
P.O. Box 543
Glastonbury, CT 06033

Estimate

Date	Estimate #
7/18/2023	1279

Name / Address	Ship To
MIRA 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114

Project	Address/Lot#

Description	Qty	Cost	Total
Fall Clean-up, Leaf & Debris Removal from lawn areas of lawn area, attached map. Price is per visit. 2 visits recommended, early November and December	1	2,200.00	2,200.00
Spraying of parking lot area and beds for weeds at office area, per treatment	1	540.00	540.00
Miscellaneous Labor for additional items, price is per man hour	1	65.00	65.00
Hauling and disposing of material off site, limbs, branches,brush, etc. Price per mason dump load.	1	350.00	350.00

Thank you for the opportunity to quote this project; we look forward to working with you.

Total $6,615.00

Primary landscaping, LLC

P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
8/16/2024	7/17/2024	31413

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due **$6,750.00**	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
Spring C/U	Spring Clean-up, prepare property for season by removing leaves and debris from property.	1	1,200.00	1,200.00
Mowing	Mowing of areas identified on map as 2x per month, price is per cut	4	400.00	1,600.00
Mowing	Mowing of areas identified on map as 1x per month, price is per cut	2	400.00	800.00
Trimming	Trim and weed whack two gate areas for access to pond, 1x per month	2	90.00	180.00
Fertilization	Spraying of parking lot area, beds, around building, all fence lines for weed, per treatment	1	2,970.00	2,970.00

Thank you for the opportunity to quote this project; we look forward to working with you.

Total $6,750.00

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Primary landscaping, LLC
P.O. Box 543
Glastonbury, CT 06033
Phone # 860-659-1009
Fax # 860-633-8182

Invoice

Due Date	Date	Invoice #
1/12/2025	12/13/2024	32005

Bill To	Ship To
MIRA Dissolution Authority 300 Maxim Road Hartford, CT 06114	300 Maxim Road Hartford, CT 06114
Balance Due **$8,940.00**	Amount Paid

Please detach top portions and return with payment

P.O. Number		Terms	Net 30

Item Code	Description	Quantity	Unit Price	Amount
Mowing	Mowing of areas identified on map as 2x per month, price is per cut 7/9, 7/24, 8/8, 8/21, 9/6, 9/17, 10/4	7	400.00	2,800.00
Mowing	Mowing of areas identified on map as 1x per month, price is per cut 7/24, 8/21, 9/25	3	400.00	1,200.00
Mowing	Mowing of areas identified on maps as 2x per year 6/29, 9/25	2	1,100.00	2,200.00
Fertilization	Spraying of parking lot area and beds, per treatment 8/9	1	540.00	540.00
Fall C/U	Fall Clean-up, Leaf & Debris Removal from lawn areas of yard. 11/12	1	2,200.00	2,200.00

Thank you for the opportunity to quote this project; we look forward to working with you.

Total $8,940.00

E-mail: Billing@primarylandscaping.com

www.PrimaryLandscaping.com

Attachment 7

South Meadows Site Energy Operating Plan

Site Energy Operating Plan

5/1/2025

Summary

Electrical power is required for the South Meadows site until decommissioning is complete. All electrical power for the Power Block Facility ("PBF") and the Waste Processing Facility ("WPF") is currently imported through the PBF Generator Interconnection circuit 5U within the Eversource switchyard. This circuit is connected to the transmission system through transformer 1A-2X at 115kv. Transformers with voltages over 100kv are considered Bulk Electric System elements and are subject to North American Electric Reliability Corporation ("NERC") regulation, which is administered in Connecticut by the Northeast Power Coordinating Council, Inc. ("NPCC").

Until which time Transformer 1A-2X can be removed, or, which time NPCC provides guidance that indicates the 1A-2X transformer is not subject to BES regulation, compliance with applicable BES safety and reliability standards must be maintained. Such compliance activities include backup battery system maintenance and routine submissions to NERC. The Authority is currently contracted with its former site operator, NAES, to provide assistance in managing NERC compliance activities and unresolved mitigations, as well as working with NPCC to minimize NERC compliance activities moving forward.

Critical circuits that require energy during site closure and decommissioning include:

- Blinking Aircraft Alert Lighting at the top of the exhaust stacks;
- Battery charging system for battery bank that powers protective relays for the 2x transformer;
- Exterior security lighting;
- Pumps used to pump water from the coal pond to the sanitary sewer - required until all ash and coal are removed from the coal pond and all drainage piping discharging to the coal pond is cleaned, and, stormwater is re-routed into other piped or natural stormwater drainage pathways;
- Pumps that move water from the PBF basement to the "80K tank," and then to the sanitary sewer – required until the completion of all PBF closure activities;
- Wastewater monitoring and control systems, which generate records used to demonstrate compliance with discharge permit requirements. Such controls also shutdown discharges if any permit limits are being approached;
- Heat tracing systems to prevent the 80K discharge piping and the oil/water separator from freezing in the winter;
- WPF administration building and warehouse, including fire detection and notification systems, building access control and security systems, powered gates and exterior lighting.

The critical circuits described above are more thoroughly described in the attached Inventory of Electrical Equipment, Buses, SUSes, MCCs and Power Panels and in the attached Updated Electrical One-Line Drawings by Phasor Engineering.

Regulatory and Vendor Contact Information

NERC Registration # NCR07045

NERC Website: https://eroportal.nerc.net/

NPCC Contact:

Brian Robinson, *Manager, Entity Risk Assessment*
Northeast Power Coordinating Council, Inc.
1040 Avenue of the Americas - 4th Floor
New York, New York 10018
O: (212) 840-4905 • **C:** (802) 636-7951
BRobinson@npcc.org • www.npcc.org

NAES NERC Support:

Stefano Schnitger, NERC Reliability Specialist
Stefano.Schnitger@naes.com

Eversource Contact information (Account #51165130196):

David Noble, Senior Account Executive, Strategic Accounts
P.O. Box 270
Hartford, CT 06141-0270
Office: 860.280.2347
Cell: 860.202.6673
david.noble@eversource.com

Rosa Sojan, Senior Engineer, Interconnections & Services | Transmission Interconnections
860.759.7252
rosa.sojan@eversource.com

Electrical Technician:

Frank Renieri (860) 620-4858

Aircraft Lighting Contractor:

Rick Sullivan (207) 893-1700
Skytec skytecinc@aol.com

Inventory of Electrical Equipment, Buses, SUSes, MCCs and Power Panels

(Yellow Highlighted Equipment Indicates Use for Wastewater Management)

(Orange Highlighted Equipment Indicates Use for Other Critical Equipment)

Equipment	location	page
station aux transformer 1A-26S	MCC-cond. #6	17
step -up transformer 1A-1X	MCC-cond. #6	17
step-up xfmr 1A-2X	MCC-cond. #5	16
sump slurry pump 1A	MCC-211	18
supply air fan #1	MCC-admin	20
supply fan #2	MCC-421	9
supply fan #4	MCC-cond. #6	17
supply fan #5	MCC-cond. #6	17
supply fan 2	MCC-cond. #5	16
supply fan 3	MCC-cond. #5	16
supply fan 4	MCC-cond. #5	16
surface grinder starter	MCC-workshop	22
SUS #11	bus 1	1
SUS #12	bus 1	1
SUS #13	bus 1	1
SUS #21	bus 2	1
SUS #31	bus 3	1
SUS #41	bus 4	1
SUS #42	bus 4	1
SUS #43	bus 4	1
temp. blowout valve MBV-1	MCC-421	9
temp. probe clg air valve	MCC-421	9
test cabinet E&I shop	MCC-warehouse	21
Tie bkr	sus 12	3
Tie Bkr	sus 13	4
Tie breaker	sus 11	2
tunnel exhaust fan PRV-1	MCC-211	18
turbine room crane	MCC-admin	20
unit heater #3	MCC-121	5
unit heater #4	MCC-121	5
unit heater #5	MCC-121	5
unit heater #6	MCC-121	5
unit htr #1	MCC-421	9
unit htr #2	MCC-421	9
UPS (back-up)	MCC-cond. #6	17
Utility revenue metering	bus 3	1
utility revenue metering	bus 2	1
Warehouse MCC	sus 11	2
warehouse over head door	MCC-warehouse	21
weld	MCC-421	9
welding receptacle	MCC-423	11
welding receptacle	MCC-432	13
welding receptacle	MCC-cond. #6	17
welding receptacle	MCC-cond. #6	17
welding receptacle	MCC-cond. #6	17
welding receptacles	MCC-workshop	22
welding receptacles	MCC-screenhouse #1	14
welding receptacles	MCC-warehouse	21
welding receptacles	MCC-screenhouse #2	15
welding receptacles	MCC-cond. #5	16
welding receptacles	MCC-cond. #5	16
welding receptacles	MCC-cond. #5	16
workshop MCC feeder	MCC-warehouse	21
WPF station service #1	bus 2	1
WPF station service #2	bus 3	1
xfer building control room supply fan #1	MCC-211	18
xfmr ICE	MCC-warehouse	21
#9 STACK (AERIAL) LIGHTS	SUS 47	

Equipment	location	page
mag. sep. #3 rectifier power supply	MCC-311	19
MCAP hoist	MCC-warehouse	21
MCC room PRV #1	MCC-431	12
MCC room PRV-2	MCC-131	8
MCC-121 (12 stoker)	sus 12	3
MCC-122 (13 S. 6th floor)	sus 12	3
MCC-123 (13 W. stoker)	sus 12	3
MCC-131 (12 MCC room)	sus 13	4
MCC-421 (11 stoker)	sus 42	3
MCC-422 (13 S. stoker)	sus 42	3
MCC-423 (11/12 6th floor)	sus 42	3
MCC-431 (11 MCC room)	sus 43	4
MCC-432 (13 MCC room)	sus 43	4
microwave xfmr	MCC-admin	20
milling machine starter	MCC-workshop	22
motor space heater panel	MCC-cond. #5	16
motor space heater panel	MCC-cond. #6	17
motor space heater power panel	MCC-screenhouse #1	14
motor space heater power panel	MCC-screenhouse #2	15
motor space heater power panel	MCC-admin	20
NALCO panel (6th floor)	sus 41	2
NU elevator	MCC-admin	20
oil reservoir return pump	MCC-admin	20
plenum air damper panel	MCC-cond. #5	16
plenum air damper panel	MCC-cond. #6	17
power distribution panel "G"	MCC-cond. #6	17
power east side panel	MCC-workshop	22
power west side panel	MCC-workshop	22
PRV-1	MCC-423	11
PRV-10 RDF area	MCC-122	6
PRV-2	MCC-423	11
PRV-3	MCC-423	11
PRV-4	MCC-423	11
PRV-5	MCC-122	6
PRV-6	MCC-122	6
PRV-7	MCC-122	6
PRV-8	MCC-122	6
PRV-9 RDF area	MCC-423	11
pugmill heater	MCC-422	10
RDF 511	MCC-211	18
RDF 513	MCC-311	19
RDF 515	MCC-211	18
RDF 517	MCC-311	19
RDF 519	MCC-211	18
RDF 521	MCC-311	19
RDF 523	MCC-211	18
RDF 525	MCC-311	19
reclaim pit PRV-2	MCC-311	19
roof top A/C	MCC-warehouse	21
Screenhouse #1 MCC	sus 41	2
Screenhouse #3 MCC	sus 11	2
Serv. Air comp.	sus 12	3
service water sump pump	MCC-screenhouse #2	15
spout splitting roller #1	MCC-211	18
spout splitting roller #2	MCC-311	19
spout splitting roller #3	MCC-211	18
spout splitting roller #4	MCC-311	19
station aux transformer 1A-25S	MCC-cond. #6	17

Equipment	location	page
en masse discharge gate 13A	MCC-311	19
en masse discharge gate 13B	MCC-311	19
exhaust fan 16	MCC-screenhouse #1	14
exhaust fan 17	MCC-screenhouse #2	15
exhaust fan 18	MCC-screenhouse #2	15
exhaust fan 2	MCC-211	18
exhaust fan 3	MCC-211	18
exhaust fan 4	MCC-211	18
exhaust fan 5	MCC-311	19
exhaust fan 6	MCC-311	19
exhaust fan 7	MCC-311	19
exhaust fan 9	MCC-warehouse	21
exhaust fan EF-11	MCC-workshop	22
fan deck panel	MCC-warehouse	21
fire pump	MCC-workshop	22
freeze protection panel	MCC-431	12
freeze protection panel 4321	MCC-432	13
freeze protection panel1311	MCC-131	8
frozen coal granulator	MCC-311	19
gate gear (gate20)	MCC-admin	20
heater for oil storage room	MCC-211	18
hopper heater cp121	MCC-131	8
HPR heater CP 111	MCC-431	12
HPR heater cp 131	MCC-432	13
hydraulic pump motor	MCC-cond. #6	17
I/O rack	MCC-421	9
I/O rack CASA-PMC-#14B	MCC-422	10
I/O rack CASA-PMC-13	MCC-121	5
I/O rack casb-pmc-15a	MCC-431	12
I/O rack CASB-PMC-15B	MCC-432	13
I/O rack CBMC-PMC-13	MCC-131	8
I/O rack cbmc-pmc-14a	MCC-431	12
I/O rack CBMC-PMC-14B	MCC-432	13
I/O rack CBMF-PMC-13	MCC-211	18
I/O rack CBMF-PMC-23	MCC-311	19
I/O rack cccc-pmc-14a	MCC-431	12
I/O rack cccc-pmc-15a	MCC-431	12
I/O rack CCCC-PMC-2413	MCC-131	8
I/O rack CCCC-PMC-24A	MCC-131	8
I/O rack CCCC-PMC-34A	MCC-432	13
I/O rack CCCC-PMC-34B	MCC-432	13
I/O rack CCHU-PMC-13	MCC-211	18
I/O rack CCHU-PMC-14	MCC-311	19
Inst. Air comp. #1	sus 12	3
Inst. Air comp. #2 (STBY)	sus 42	3
large drill press	MCC-workshop	22
lighting panel	MCC-admin	20
lighting panel #4	MCC-cond. #6	17
lighting panel 2	MCC-cond. #5	16
lighting panel 3	MCC-cond. #5	16
lighting panel A1	MCC-admin	20
lighting panel A4	MCC-admin	20
lighting panel SCI	MCC-screenhouse #1	14
lighting panel SO3	MCC-screenhouse #2	15
lighting panel W-H 1	MCC-warehouse	21
lighting xfmr admin building	MCC-admin	20
lube oil transfer pump	MCC-cond. #6	17
Mag. Sep. #1 rectifier power supply	MCC-211	18

Equipment	location	page
coal cvy 2	MCC-211	18
coal cvy 3	MCC-211	18
coal cvy 4	MCC-211	18
coal cvy. 3 mag sep.	MCC-311	19
coal dist. Power	MCC-421	9
coal diverter gate 1	MCC-311	19
condensate make-up pump	MCC-cond. #5	16
condensate receiver motor #1	MCC-cond. #6	17
condensate receiver motor #2	MCC-cond. #6	17
condenser pit starters 3,4,5,6	MCC-cond. #5	16
control room A/C	MCC-421	9
control room A/C unit	MCC-131	8
control room A/C unit heat coils (transfer building)	MCC-311	19
control room dust htr.	MCC-131	8
CR-3 motor 1	MCC-cond. #5	16
CR-3 motor 2	MCC-cond. #5	16
CW sump pump	MCC-screenhouse #2	15
D.C. center electric heater UH-27	MCC-cond. #5	16
D.C. center electrical feeder	MCC-cond. #6	17
demin area supply fan 1	MCC-123	7
demin water heater #1	MCC-422	10
demin water xfer pump 1	MCC-123	7
dirty water sump 1	MCC-cond. #5	16
dirty water sump 2	MCC-cond. #5	16
dirty water sump 3	MCC-cond. #5	16
dirty water sump 4	MCC-cond. #5	16
dirty water sump pump #1	MCC-cond. #6	17
dirty water sump pump #2	MCC-cond. #6	17
distribution spout 13	MCC-211	18
distributor drive power	MCC-121	5
distributor drive power	MCC-123	7
diverting spout 3	MCC-211	18
diverting spout 4	MCC-311	19
dozer garage feeder breaker	MCC-211	18
drill press starter	MCC-workshop	22
dust collector control panel #1	MCC-311	19
dust collector control panel #2	MCC-211	18
dust collector cp2	MCC-131	8
econ D.D. vlv	MCC-421	9
electric unit heater 13	MCC-screenhouse #2	15
electric unit heater 14	MCC-screenhouse #2	15
electric unit heater 15	MCC-screenhouse #2	15
electric unit heater 16	MCC-screenhouse #2	15
electric unit heater 17	MCC-screenhouse #2	15
electric unit heater 19	MCC-screenhouse #2	15
electric unit heater 20	MCC-screenhouse #2	15
electric unit heater 8	MCC-screenhouse #2	15
electric unit heater EUH-1	MCC-screenhouse #1	14
electric unit heater EUH-2	MCC-screenhouse #1	14
electric unit heater EUH-3	MCC-screenhouse #1	14
electric unit heater EUH-4	MCC-screenhouse #1	14
electric unit heater EUH-6	MCC-screenhouse #1	14
electrical bay fan#19	MCC-123	7
en masse cvy 5	MCC-211	18
en masse discharge gate 11A	MCC-311	19
en masse discharge gate 11B	MCC-311	19
en masse discharge gate 12A	MCC-211	18
en masse discharge gate 12B	MCC-211	18

Equipment	location	page
6 L.P. extraction MBV-13	MCC-422	10
6 M.P. extraction MBV-10	MCC-422	10
6 main seal oil pump	MCC-cond. #6	17
6 seal oil vacuum pump	MCC-cond. #6	17
6 turning gear	MCC-cond. #6	17
6 turning gear oil pump	MCC-cond. #6	17
6A BFP	bus 3	1
6A BFP discharge valve	MCC-422	10
6A BFP L.O. pump	MCC-421	9
6A cond. Booster pump	sus 42	3
6A cond. pump	MCC-422	10
6B BFP	bus 4	1
6B BFP discharge valve	MCC-422	10
6B BFP L.O. pump	MCC-422	10
6B bottom ash blower	MCC-422	10
6B bottom ash cvy	MCC-422	10
6B bottom ash winch	MCC-422	10
6B cond. Booster pump	sus 42	3
6B cond. pump	MCC-422	10
6-EL	MCC-workshop	22
6N CW pump	sus 41	2
6N CW traveling screen	MCC-screenhouse #1	14
6N CWP discharge valve	MCC-screenhouse #1	14
6S CW pump	sus 11	2
6S CW traveling screen	MCC-screenhouse #1	14
6S CWP discharge valve	MCC-screenhouse #1	14
7N oily waste pump	MCC-warehouse	21
7S oily waste pump	MCC-warehouse	21
8E sanitary lift pump	MCC-warehouse	21
8W sanitary lift pump	MCC-warehouse	21
accumulator pump	MCC-cond. #5	16
add. Storage tank mixer	MCC-431	12
Admin MCC	sus 12	3
ash storage PRV-1	MCC-131	8
Aux Boiler MCC	sus 41	2
band saw starter	MCC-workshop	22
Barge Unloader	bus 3	1
battery charger #2	MCC-cond. #6	17
battery charger 1	MCC-cond. #5	16
battery charger 3	MCC-cond. #5	16
belt feeder #1 F&G LOH	MCC-211	18
belt feeder #1 FPG Fan	MCC-211	18
bench grinder starter 1	MCC-workshop	22
bench grinder starter 2	MCC-workshop	22
BFP #1M hydraulic coupling pump	MCC-cond. #6	17
Bus 1 to 3 tie bkr	bus 3	1
Bus 2 to 4 tie bkr	bus 4	1
CAPB xfmr 4311	MCC-431	12
chem waste mixer	MCC-422	10
chem waste pump discharge valve MBV-6	MCC-123	7
chem waste pump recirc valve MBV-12	MCC-123	7
Chimney lighting j-box #40	MCC-431	12
circ water sump pump	MCC-screenhouse #1	14
circulation fan 1	MCC-123	7
circulation fan 2	MCC-123	7
circulation fan 3	MCC-123	7
coal belt feeder #1	MCC-211	18
coal cvy 1	MCC-211	18

Equipment	location	page	
3B bottom ash blower	MCC-421	9	
3B bottom ash cvy.	MCC-121	5	
3B coal belt feeder	MCC-311	19	
3B demin regen water pump	MCC-123	7	
480v pp 1231	MCC-123	7	
480v pp 1311	MCC-131	8	LIGHTING
480v pp 4311	MCC-431	12	
480v pp xfmr 4211	MCC-421	9	
480V ppl 4231	MCC-423	11	
480v ppl-3111	MCC-311	19	
4B bottom ash blower	MCC-422	10	
4B bottom ash cvy.	MCC-121	5	
4th floor panel	MCC-admin	20	
5 centrifuge	MCC-cond. #5	16	
5 cond. MCC	sus 12	3	
5 cond. supply shutoff MBV-2	MCC-121	5	
5 gland seal steam vapor extractor	MCC-cond. #5	16	
5 h.p. extraction MBV-1	MCC-121	5	
5 jennings pump	MCC-cond. #5	16	
5 l.p. extraction MBV-11	MCC-121	5	
5 m.p. extraction MBV-7	MCC-121	5	
5 main seal oil pump	MCC-cond. #5	16	
5 main steam drain MBV-40	MCC-121	5	
5 main steam drain shutoff MBV-39	MCC-121	5	
5 reservoir vapor extractor	MCC-cond. #5	16	
5 turbine drain pump	MCC-cond. #5	16	
5 turning gear	MCC-cond. #5	16	
5 turning gear oil pump	MCC-cond. #5	16	
5 vacuum pump	MCC-cond. #5	16	
5A BFP	bus 1	1	
5A BFP discharge valve	MCC-121	5	
5A BFP L.O. pump	MCC-121	5	
5A cond. Booster pump	sus 12	3	
5A cond. pump	MCC-121	5	
5A distribution cvy	MCC-431	12	
5A main oil pump	MCC-cond. #5	16	
5B BFP	bus 2	1	
5B BFP discharge valve	MCC-121	5	
5B BFP lube oil pump	MCC-123	7	
5B bottom ash blower	MCC-422	10	
5B bottom ash cvy.	MCC-131	8	
5B cond. Booster pump	sus 12	3	
5B cond. pump	MCC-121	5	
5B MLOP	MCC-cond. #6	17	
5N CW pump	sus 41	2	
5N CW pump discharge valve	MCC-screenhouse #2	15	
5N traveling screen	MCC-screenhouse #2	15	
5S CW pump	sus 11	2	
5S CW pump discharge valve	MCC-screenhouse #2	15	
5S traveling screen	MCC-screenhouse #2	15	
6 centrifuge	MCC-cond. #6	17	
6 cond. MCC	sus 42	3	
6 DA cond. Shutoff valve MBV-3	MCC-421	9	
6 drip leg drain MBV 41	MCC-421	9	
6 drip leg drain MBV 42	MCC-421	9	
6 emergency seal oil pump	MCC-cond. #6	17	
6 gland steam vapor extractor	MCC-cond. #6	17	
6 HP extraction BV-3	MCC-421	9	

Equipment	location	page
13D auger drive	MCC-423	11
13D sifting screw	MCC-422	10
13E sifting screw	MCC-422	10
13F sifting screw	MCC-422	10
13G sifting screw	MCC-422	10
13H sifting screw	MCC-422	10
13I sifting screw	MCC-422	10
13J sifting screw	MCC-422	10
15KVA transformer	MCC-cond. #6	17
15KVA transformer feeder	MCC-cond. #6	17
15kVA xfmr	MCC-screenhouse #1	14
15kVA xfmr	MCC-cond. #5	16
15kVa xfmr	MCC-warehouse	21
15KVA xfmr	MCC-screenhouse #2	15
15kVA xfmr feeder	MCC-screenhouse #1	14
15KVA xfmr feeder	MCC-screenhouse #2	15
15kVA xfmr feeder	MCC-cond. #5	16
15kVA xfmr feeder	MCC-admin	20
X 15kVA xfmr feeder	MCC-warehouse	21 X
1A add. xfer pump	MCC-432	13
1A CCCW pump	MCC-121	5
1A chem waste pump	MCC-123	7
1A FAC	MCC-431	12
1A SMUW xfer pump	MCC-131	8
1A SW pump	bus 1	1
1A SW pump discharge valve	MCC-screenhouse #2	15
1A traveling screen	MCC-screenhouse #2	15
1A-25S station aux xfmr	MCC-cond. #5	16
1A-26S station aux xfmr	MCC-cond. #5	16
1B add. Xfer pump	MCC-131	8
1B CCCW pump	MCC-422	10
1B chem waste pump	MCC-422	10
1B dewatering pump	MCC-screenhouse #1	14
1B FAC	MCC-131	8
1B scrubber make-up water pump	MCC-431	12
1B sump slurry pump	MCC-311	19
1B SW pump	bus 4	1
1B SW pump discharge valve	MCC-screenhouse #2	15
1B traveling screen	MCC-screenhouse #2	15
230/208v pp xfmr 4232	MCC-423	11
24" lathe starter	MCC-workshop	22
240v pp xfmr 1231	MCC-123	7
240v pp xfmr 4212	MCC-421	9
240v xfmr 4221	MCC-422	10
277/480v lp xfmr	MCC-131	8
277/480v lp xfmr 1211	MCC-121	5
277/480v LP xfmr 1221	MCC-122	6
277/480v lp xfmr 2111	MCC-211	18
2A FAC	MCC-131	8
2A FAC	MCC-431	12
2A SMUW pump	MCC-131	8
2B FAC	MCC-131	8
2B FAC	MCC-432	13
2B SMUW pump	MCC-432	13
2nd floor panel	MCC-admin	20
3A coal belt feeder	MCC-311	19
3A demin regen water pump	MCC-422	10
3B blower #2	MCC-422	10

Equipment	location	page
12B FAC	MCC-131	8
12B grate drive	MCC-123	7
12B ignitor air fan	MCC-123	7
12B sifting screw	MCC-121	5
12B sifting xfer	MCC-121	5
12C auger drive	MCC-122	6
12C chute roller	MCC-122	6
12C sifting screw	MCC-121	5
12D auger drive	MCC-122	6
12D sifting screw	MCC-121	5
12E sifting screw	MCC-121	5
12F sifting screw	MCC-121	5
12G sifting screw	MCC-121	5
12H sifting screw	MCC-121	5
12I sifting screw	MCC-121	5
12J sifting screw	MCC-121	5
13 add. feed tank mixer	MCC-432	13
13 add. rec strainer	MCC-432	13
13 air heater cvy	MCC-432	13
13 bottom ash blower	MCC-422	10
13 bottom ash cvy	MCC-422	10
13 E/W cvy	MCC-422	10
13 economizer cvy.	MCC-422	10
13 ID fan discharge damper	MCC-432	13
13 ID fan seal air fan	MCC-432	13
13 MCC room PRV-3	MCC-432	13
13 N/S cvy	MCC-422	10
13 OFA fan	sus 42	3
13 PDA fan	MCC-422	10
13 reverse air fan	MCC-432	13
13 S.H. vent MBV-102	MCC-122	6
13 SDA bypass damper	MCC-432	13
13 SDA bypass damper seal air fan	MCC-432	13
13 SDA inlet damper	MCC-432	13
13 SDA inlet damper seal air fan	MCC-432	13
13 SDA outlet damper	MCC-432	13
13 SDA outlet damper seal air fan	MCC-432	13
13 SDA vent fan	MCC-432	13
13 SSC	MCC-422	10
13A add. feed pump	MCC-432	13
13A auger drive	MCC-423	11
13A chute roller	MCC-423	11
13A FAC	MCC-432	13
13A grate drive	MCC-422	10
13A ignitor air fan	MCC-422	10
13A sifting screw	MCC-422	10
13A sifting xfer	MCC-422	10
13B add. feed pump	MCC-432	13
13B auger drive	MCC-423	11
13B chute roller	MCC-423	11
13B FAC	MCC-432	13
13B grate drive	MCC-422	10
13B ignitor air fan	MCC-422	10
13B sifting screw	MCC-422	10
13B sifting xfer	MCC-422	10
13C auger drive	MCC-423	11
13C chute roller	MCC-423	11
13C sifting screw	MCC-422	10

Equipment	location	page
11B ignitor air fan	MCC-421	9
11B sifting screw	MCC-421	9
11B sifting xfer	MCC-421	9
11C auger drive	MCC-423	11
11C chute roller	MCC-423	11
11C sifting screw	MCC-421	9
11D auger drive	MCC-423	11
11D sifting screw	MCC-421	9
11E sifting screw	MCC-421	9
11E/W	MCC-421	9
11F sifting screw	MCC-421	9
11G sifting screw	MCC-421	9
11H sifting screw	MCC-421	9
11I sifting screw	MCC-421	9
11J sifting screw	MCC-421	9
12 add. Feed tank mixer	MCC-131	8
12 add. Rec. strainer	MCC-131	8
12 air heater cvy.	MCC-131	8
12 bottom ash cvy.	MCC-121	5
12 bottom ash cvy. blower	MCC-121	5
12 distribution spout	MCC-311	19
12 E/W sifting screw	MCC-121	5
12 economizer cvy	MCC-121	5
12 ID fan discharge damper	MCC-131	8
12 ID fan discharge damper seal air fan	MCC-131	8
12 N/S sifting screw	MCC-121	5
12 OFA fan	sus 12	3
12 PDA fan	MCC-123	7
12 reverse air fan	MCC-131	8
12 S.H. vent valve MBV-101	MCC-423	11
12 SDA bypass damper	MCC-131	8
12 SDA bypass damper seal air fan	MCC-131	8
12 SDA inlet damper	MCC-131	8
12 SDA inlet damper seal air fan	MCC-131	8
12 SDA outlet damper	MCC-131	8
12 SDA outlet damper seal air fan	MCC-131	8
12 SSC	MCC-121	5
120/208 pp xfmr 4321	MCC-432	13
120/208v pp 4312	MCC-431	12
120/208v pp xfmr 1211	MCC-121	5
120/208v pp xfmr 3111	MCC-311	19
120/208v pp xfmr 4221	MCC-422	10
120/208v xfmr 1311	MCC-131	8
120/208v xfmr 4231	MCC-423	11
120/280v xfmr 4211	MCC-421	9
120/480v pp xfmr 2111	MCC-211	18
120/480v pp xfmr 4311	MCC-431	12
12A add. Feed pump	MCC-131	8
12A auger drive	MCC-122	6
12A chute roller	MCC-122	6
12A FAC	MCC-131	8
12A grate drive	MCC-123	7
12A ignitor air fan	MCC-123	7
12A sifting screw	MCC-121	5
12A sifting xfer	MCC-121	5
12B add. Feed pump	MCC-131	8
12B auger drive	MCC-122	6
12B chute roller	MCC-122	6

Equipment	location	page
#1 oily waste separator heater	MCC-warehouse	21
#1 pugmill feeder	MCC-432	13
#1 pugmill paddle shaft	MCC-432	13
#1 Vent fan	bus 4	1
#11 atomizer	sus 43	4
#11 FD fan	bus 1	1
#11 ID fan	bus 1	1
#12 atomizer	sus 13	4
#12 FD fan	bus 2	1
#12 ID fan	bus 2	1
#13 atomizer	sus 43	4
#13 FD fan	bus 4	1
#13 ID fan	bus 4	1
#1M BFP	sus 11	2
#2 fly ash rec. feed pump	MCC-432	13
#2 fly ash rec. feed tank mixer	MCC-432	13
#2 oily waste separator heater	MCC-warehouse	21
#2 pugmill feeder	MCC-131	8
#2 pugmill paddle shaft	MCC-131	8
#2 recycle feed cvy	MCC-431	12
#2 Vent fan	bus 3	1
#9 FD fan	bus 1	1
11 add. Feed tank mixer	MCC-431	12
11 add. Recycle strainer	MCC-431	12
11 air heater cvy	MCC-431	12
11 baghouse reverse air fan	MCC-431	12
11 bottom ash xfer.	MCC-421	9
11 bottom ash xfer. Blower	MCC-421	9
11 distribution spout	MCC-311	19
11 econ. Cvy	MCC-421	9
11 ID fan discharge damper	MCC-431	12
11 ID fan discharge damper seal air fan	MCC-431	12
11 N/S	MCC-421	9
11 OFA fan	sus 42	3
11 PDA fan	MCC-421	9
11 S.H. vent valve MBV-100	MCC-423	11
11 SDA bypass damper	MCC-431	12
11 SDA bypass damper seal air fan	MCC-431	12
11 SDA inlet damper	MCC-431	12
11 SDA inlet damper seal air fan	MCC-431	12
11 SDA outlet damper	MCC-431	12
11 SDA outlet damper seal air fan	MCC-431	12
11 SSC	MCC-421	9
11A add. Feed pump	MCC-431	12
11A auger drive	MCC-423	11
11A chute roller	MCC-423	11
11A D.D. vlv	MCC-421	9
11A FAC	MCC-431	12
11A grate drive	MCC-421	9
11A ignitor air fan	MCC-421	9
11A sifting screw	MCC-421	9
11A sifting xfer	MCC-421	9
11B add. Feed pump	MCC-431	12
11B auger drive	MCC-423	11
11B chute roller	MCC-423	11
11B D.D. vlv	MCC-421	9
11B FAC	MCC-431	12
11B grate drive	MCC-421	9

Bus #1

#11 FD fan
#11 ID fan
5A BFP
1A SW pump
SUS #11
SUS #12
SUS #13
#9 FD fan

SUS 11

5S CW pump
6S CW pump
Warehouse MCC
Screenhouse #3 MCC
Tie breaker
#1M BFP

SUS 12

12 OFA fan
5A cond. Booster pump
5B cond. Booster pump
Inst. Air comp. #1
Serv. Air comp.
5 cond. MCC
Admin MCC
MCC-121 (12 stoker) LIGHTING/BOILER/PLANT
MCC-122 (13 S. 6th floor)
MCC-123 (13 W. stoker)
Tie bkr

SUS 13

#12 atomizer
MCC-131 (12 MCC room) LIGHTING/BAG HOUSE AREA'S
Tie Bkr

Bus #2

#12 FD fan
#12 ID fan
5B BFP
WPF station service #1
utility revenue metering
SUS #21

SUS 21

MCC-211

Bus #3

6A BFP
WPF station service #2
Barge Unloader
Utility revenue metering
SUS #31
#2 Vent fan
Bus 1 to 3 tie bkr

SUS 31

MCC-311

Bus #4

#13 FD fan
#13 ID fan
6B BFP
SUS #41
SUS #42
SUS #43
#1 Vent fan
1B SW pump
Bus 2 to 4 tie bkr

SUS 41

5N CW pump
6N CW pump
Aux Boiler MCC #9 STACK (AERIAL) LIGHTING
Screenhouse #1 MCC
NALCO panel (6th floor)

SUS 42

11 OFA fan
13 OFA fan
6A cond. Booster pump
6B cond. Booster pump
Inst. Air comp. #2 (STBY)
6 cond. MCC
MCC-421 (11 stoker) LIGHTING/BOILER/PLANT
MCC-422 (13 S. stoker)
MCC-423 (11/12 6th floor)

SUS 43

#11 atomizer
#13 atomizer
MCC-431 (11 MCC room) CHIMNEY LIGHTING
MCC-432 (13 MCC room)

SUS 11/41 (ash alley north 11 SSC)

SUS #11

5S CW pump
6S CW pump
Warehouse MCC
Screenhouse #3 MCC
Tie breaker
#1M BFP

27 relay	5S CW pump	Screenhouse #3 MCC	Aux Boiler MCC	27 relay
MAIN	6S CW pump	TIE BKR		MAIN
59 relay	BFP 1M	NALCO	6N CW pump	59 relay
	Warehouse MCC	Screenhouse #1 MCC	5N CW pump	



SUS #41

5N CW pump
6N CW pump
Aux Boiler MCC
Screenhouse #1 MCC
NALCO panel (6th floor)

SUS 12/42 (4160 room)

27relay	12 OFA	MCC-122		COND. 6 MCC	MCC-422	6A cond. Booster pump	27 relay
Main feeder	5A cond. Booster pump	SERV. AIR COMP	TIE BKR	INST. AIR COMP. #2 (STBY)	MCC-421	13 OFA	Main feeder
	5B cond. Booster pump	INST. AIR COMP. #1	MCC-123	MCC-423	6B cond. Booster pump	11 OFA	
59 relay	MCC-121	COND. 5 MCC	ADMIN MCC				59 relay

SUS #12

12 OFA fan
5A cond. Booster pump
5B cond. Booster pump
Inst. Air comp. #1
Serv. Air comp.
5 cond. MCC
Admin MCC
MCC-121 (12 stoker)
MCC-122 (13 S. 6th floor)
MCC-123 (13 W. stoker)
Tie bkr



SUS #42

11 OFA fan
13 OFA fan
6A cond. Booster pump
6B cond. Booster pump
Inst. Air comp. #2 (STBY)
6 cond. MCC
MCC-421 (11 stoker)
MCC-422 (13 S. stoker)
MCC-423 (11/12 6th floor)

BUS #2

#12 FD fan
#12 ID fan
5B BFP
WPF station service #1
utility revenue metering
SUS #21

	BUS 2 feeder 1A-25s	WPF #1	12 FD	5B BFP	
	potential xfmrs	12 ID	SUS 21	Bus #4 tie	

BUS #1

#11 FD fan
#11 ID fan
5A BFP
1A SW pump
SUS #11
SUS #12
SUS #13
#9 FD fan

	5A BFP	11 ID	SUS 12	1A SW pump	BUS 1 feeder	
Bus #3 tie	SUS 11	11 FD	SUS 13	9 FD	potential xfmrs	

BUS #3

6A BFP
WPF station service #2
Barge Unloader
Utility revenue metering
SUS #31
#2 Vent fan
Bus 1 to 3 tie bkr

	BUS 3 feeder	WPF #2	SUS 31	MCAP Fan #2	
	potential xfmrs	6A BFP	Barge Unloader	BUS 1 to 3 TIE BKR	

BUS #4

#13 FD fan
#13 ID fan
6B BFP
SUS #41
SUS #42
SUS #43
#1 Vent fan
1B SW pump
Bus 2 to 4 tie bkr

6B BFP	SUS 41	13 FD	MCAP Fan #1	1B SW pump	BUS 4 feeder	
BUS 2 to 4 TIE BKR	13 ID	SUS 42	SUS 43	BFP mtr 15	potential xfmrs	

SUS 13/43 (scrubber control room)

SUS #13

#12 atomizer
MCC-131 (12 MCC room)
Tie Bkr

27 relay		11 Atomizer	27 relay
MAIN	TIE BKR	MCC-431	MAIN
59 relay	12 Atomizer	MCC-432	59 relay
	MCC-131	13 Atomizer	



SUS #43

#11 atomizer
#13 atomizer
MCC-431 (11 MCC room)
MCC-432 (13 MCC room)

MCC-121 (2nd floor behind 12 boiler)

bottom ash xfer blower	MBV-39		htr-6	MBV-2	12A	12G	E/W cvy	bottom ash xfer
D.D. vavles		htr-3			12B	12H	A sifting xfer	econ cvy
xfmr xfmr	MBV-40	htr-4	5A BFP L.O. pump	MBV-1	12C	12I	B sifting xfer	N/S cvy
5A BFP discharge	MBV-11	htr-5	5B cond. pump		12D	12J	4B	ssc
		5A cond pump	1A CCCW pump		12E	D.D valves	3B	I/O rack
5B BFP discharge	MBV-7			distributor drive power	12F	D.D valves		

5A cond. pump
5B cond. pump
5A BFP discharge valve
5B BFP discharge valve
5A BFP L.O. pump
5 l.p. extraction MBV-11
5 m.p. extraction MBV-7
5 h.p. extraction MBV-1
5 main steam drain shutoff MBV-39
5 main steam drain MBV-40
5 cond. supply shutoff MBV-2
1A CCCW pump
12 bottom ash cvy. blower
12 bottom ash cvy.
12 N/S sifting screw
12 E/W sifting screw
12A sifting xfer
12B sifting xfer
12 economizer cvy
12 SSC

3B bottom ash cvy.
4B bottom ash cvy.
277/480v lp xfmr 1211 6TH FLOOR LIGHTING PANEL
120/208v pp xfmr 1211
unit heater #3
unit heater #4
unit heater #5
unit heater #6
I/O rack CASA-PMC-13
distributor drive power
12A sifting screw
12B sifting screw
12C sifting screw
12D sifting screw
12E sifting screw
12F sifting screw
12G sifting screw
12H sifting screw
12I sifting screw
12J sifting screw

MCC-123

<table>
<tr><td rowspan="2"></td><td rowspan="2">12A grate</td><td></td><td>demin heater fans</td><td>bay fan 19</td><td>weld</td><td></td></tr>
<tr><td colspan="2">circ fan 1</td><td></td><td colspan="2">5B BFP L.O. pump</td></tr>
<tr><td rowspan="2">A/C</td><td rowspan="2">12B grate</td><td colspan="2">circ fan 2</td><td>chem waste 1A</td><td colspan="2">ignitor air fan 12A</td></tr>
<tr><td rowspan="2">demin</td><td rowspan="2">chem waste discharge</td><td colspan="2">clrc fan 3</td><td></td><td colspan="2">ignitor alr fan 12B</td></tr>
<tr><td rowspan="2">3B regen water</td><td rowspan="2">chem waste recirc</td><td colspan="2" rowspan="2">demin area supply fan</td><td></td><td></td><td rowspan="2">PDA</td></tr>
<tr><td></td><td></td><td colspan="2"></td></tr>
</table>

12A grate drive
12B grate drive
12 PDA fan
12A ignitor air fan
12B ignitor air fan
3B demin regen water pump
1A chem waste pump
demin water xfer pump 1
demin area supply fan 1
chem waste pump recirc valve MBV-12
chem waste pump discharge valve MBV-6

5B BFP lube oil pump
distributor drive power
circulation fan 1
circulation fan 2
circulation fan 3
480v pp 1231
240v pp xfmr 1231
electrical bay fan#19

MCC-122 (6th floor south of 13)

<table>
<tr><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td colspan="2">CAPC-xf-1221</td><td rowspan="2"></td><td rowspan="2">13 2 1/2 vent vavle MBV-102</td></tr>
<tr><td rowspan="3">12B auger drive</td><td rowspan="2">PRV-10</td><td colspan="2" rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td rowspan="2"></td><td rowspan="2">12B chute roller</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td rowspan="3">12A auger drive</td><td>12A chute roller</td><td>12C chute roller</td><td colspan="2">PRV-8</td><td></td><td></td></tr>
<tr><td>PRV-6</td><td rowspan="2">12C auger drive</td><td colspan="2" rowspan="2"></td><td rowspan="2">12D auger drive</td><td>D.D. 12</td></tr>
<tr><td>PRV-7</td><td></td></tr>
</table>

12A auger drive
12B auger drive
12C auger drive
12D auger drive
12A chute roller
12B chute roller
12C chute roller
277/480v LP xfmr 1221
13 S.H. vent MBV-102
PRV-10 RDF area
PRV-5
PRV-6
PRV-7
PRV-8



MCC-131 (12 MCC room)

	CAPB-xf-1312	CEM outlet	2A FA rec. feed pump		LP-xfmr-1311		hopper heater	SDA seal air inlet damper		freeze protection			
	weld			12 add. Feed tank mixer	SDA inlet damper 12A1		SDA bypass damper	SDA outlet seal air damper				air heater cvy	5B cvy
	2A SMUW pump		1B add. Xfer pump	12A add. Feed pump				SDA bypass seal air damper	12 reverse air fan	12A FAC		1B FAC	#2 pugmill paddle shaft
CAPC-PPL-1311		weld	1A SMUW xfer pump	12B add. Feed pump	scrubber control room HTR		SDA outlet damper	PRV-2		12B FAC			#2 pugmill feeder
add. Prep supply fan	ash storage PRV-1		I/O rack	I/O rack					add. Rec. strainer	pugmill dry crossover		2B FAC	
seal air fan	scrubber 12 MCC room vent fan						12 ID fan discharge damper						

12 SDA inlet damper seal air fan
12 SDA outlet damper seal air fan
12 SDA bypass damper seal air fan
12 SDA inlet damper
12 SDA outlet damper
12 SDA bypass damper
12 ID fan discharge damper seal air fan
12 ID fan discharge damper
12A FAC
12B FAC
12 reverse air fan
12A add. Feed pump
12B add. Feed pump
12 add. Feed tank mixer
12 add. Rec. strainer
12 air heater cvy.
2A SMUW pump
2A FAC
#2 pugmill paddle shaft
#2 pugmill feeder



2B FAC
1A SMUW xfer pump
1B add. Xfer pump
1B FAC
5B bottom ash cvy.
control room dust htr.
control room A/C unit
MCC room PRV-2
ash storage PRV-1
hopper heater cp121
dust collector cp2
480v pp 1311
277/480v lp xfmr
120/208v xfmr 1311
freeze protection panel1311
I/O rack CBMC-PMC-13
I/O rack CCCC-PMC-2413
I/O rack CCCC-PMC-24A

MCC-421 (2nd floor behind 11 boiler)

	weld	capc-xf-4212	MBV 41	A ignitor air fan	11 bottom ash xfer. Blower	weld	ppl-capc-4211	11A sifting screw	11F sifting screw	11 econ. Cvy.
capc-xf-4211 capc-xf-4211			MBV 42	B ignitor air fan	11A grate			11B sifting screw	11G sifting screw	11 N/S
temp blowout valve MBV-1	temp probe			3B bottom ash blower				11C sifting screw	11H sifting screw	11 bottom ash xfer.
				6 cond. Shutoff MBV-3	11B grate			11D sifting screw	11I sifting screw	11 SSC
heater #1	supply fan #2					11A sifting xfer.		11E sifting scerw	11J sifting scerw	I/O rack
heater #2	6A BFP lube oil pump		A/C control room	6 HP extraction MBV-3	11PDA	11B sifting xfer.		11 econ. Cvy		

6 drip leg drain MBV 41
6 drip leg drain MBV 42
6 DA cond. Shutoff valve MBV-3
6 HP extraction BV-3
6A BFP L.O. pump
11A grate drive
11B grate drive
11 SSC
11 bottom ash xfer.
11 bottom ash xfer. Blower
11 PDA fan
11A ignitor air fan
11B ignitor air fan
11 econ. Cvy
11 N/S
11E/W
3B bottom ash blower
coal dist. Power
temp. probe clg air valve
control room A/C
temp. blowout valve MBV-1
weld



11A sifting screw
11B sifting screw
11C sifting screw
11D sifting screw
11E sifting screw
11F sifting screw
11G sifting screw
11H sifting screw
11I sifting screw
11J sifting screw
11A sifting xfer
11B sifting xfer
econ D.D. vlv
11A D.D. vlv
11B D.D. vlv
unit htr #1
unit htr #2
supply fan #2
120/280v xfmr 4211
240v pp xfmr 4212
480v pp xfmr 4211
I/O rack

MCC-422 (2nd floor south side of 13)

demin water heater	6B BFP L.O. pump		pugmill heater	6B winch	5B blower	MBV-13		13A sifting		N/S
6B	6A BFP discharge valve				6B cond.		3B blower #2	13B sifting	4B blower	bottom ash xfer
		1B chem waste pump			6B blower	MBV-10	D.D valve	13C sifting	13G sifting	econ cvy
A grate	6B BFP discharge valve	3A regen pump		1B CCCW pump	xfer blower	13A ignitor air fan	E/W	13D sifting	13H sifting	SSC
	PDA	chem waste mixer			6A cond	13B ignitor air fan	A sifting xfer	13E sifting	13I sifting	I/O rack
B grate							B sifting xfer	13F sifting	13J sifting	

6A cond. pump
6B cond. pump
6A BFP discharge valve
6B BFP discharge valve
6B BFP L.O. pump
6 L.P. extraction MBV-13
6 M.P. extraction MBV-10
6B bottom ash cvy
6B bottom ash blower
6B bottom ash winch
4B bottom ash blower
5B bottom ash blower
1B chem waste pump
chem waste mixer
3A demin regen water pump
demin water heater #1
1B CCCW pump
pugmill heater
13 PDA fan
120/208v pp xfmr 4221
240v xfmr 4221
I/O rack CASA-PMC-#14B

13A ignitor air fan
13B ignitor air fan
13A grate drive
13B grate drive
13 SSC
13 economizer cvy.
13 N/S cvy
13 E/W cvy
13 bottom ash cvy
13 bottom ash blower
13A sifting xfer
13B sifting xfer
13A sifting screw
13B sifting screw
13C sifting screw
13D sifting screw
13E sifting screw
13F sifting screw
13G sifting screw
13H sifting screw
13I sifting screw
13J sifting screw
3B blower #2

MCC-423 (6th floor between 11/12)

<table>
<tr><td rowspan="2"></td><td>weld</td><td></td><td>CAPB-xf-4231</td><td>weld</td><td></td><td></td><td>11C chute roller</td><td colspan="2">11 2 1/2 vent valve MBV-100</td><td>13C chute roller</td></tr>
<tr><td colspan="2">D.D. 13</td><td colspan="2">11A chute roller</td><td colspan="2">PRV-9</td><td></td><td colspan="2" rowspan="2">12 2 1/2 vent valve MBV-101</td><td></td></tr>
<tr><td rowspan="2">CAPC-PPL-4231</td><td colspan="2">PRV-2</td><td colspan="2">11B chute roller</td><td colspan="2" rowspan="2">13D auger drive</td><td>13A cute roller</td><td rowspan="2">13B auger drive</td></tr>
<tr><td colspan="2">PRV-3</td><td colspan="2">PRV-4</td><td>13B chute roller</td><td>weld</td><td>CAPB-xf-4232</td></tr>
<tr><td colspan="2"></td><td colspan="2" rowspan="2">11A auger drive</td><td colspan="2" rowspan="2">11B auger drive</td><td colspan="2" rowspan="2">11C auger drive</td><td rowspan="2">11D auger drive</td><td colspan="2" rowspan="2">13A auger drive</td><td rowspan="2">13C auger drive</td></tr>
<tr><td colspan="2">PRV-1</td></tr>
</table>

11A auger drive
11B auger drive
11C auger drive
11D auger drive
11A chute roller
11B chute roller
11C chute roller
11 S.H. vent valve MBV-100
12 S.H. vent valve MBV-101
120/208v xfmr 4231
230/208v pp xfmr 4232
480V ppl 4231
welding receptacle



13A auger drive
13B auger drive
13C auger drive
13D auger drive
13A chute roller
13B chute roller
13C chute roller
PRV-1
PRV-2
PRV-3
PRV-4
PRV-9 RDF area

MCC-431 (11 MCC room)

	MCC room PRV		weld	electrical shop htr		ID fan discharge damper		inlet seal air fan				
	rec. feed cvy #2	SDA inlet damper		SDA bypass damper				outlet seal air fan		freeze protection	chimney lighting	
	add. Storage tank mixer						add. Rec. strainer	bypass seal air fan	1A N/S FAC	11A FAC		
	1B SMUW pump	SDA outlet damper				add. Feed tank mixer				11B FAC		11 air heater cvy
11 seal air fan	I/O rack	I/O rack			11A add. Feed pump	11 rev. air fan			2A E/W FAC			
					11B add. Feed pump							

11 SDA inlet damper
11 SDA inlet damper seal air fan
11 SDA bypass damper
11 SDA bypass damper seal air fan
11 SDA outlet damper
11 SDA outlet damper seal air fan
11 ID fan discharge damper
11 ID fan discharge damper seal air fan
11 baghouse reverse air fan
11A FAC
11B FAC
11A add. Feed pump
11B add. Feed pump
11 air heater cvy
11 add. Feed tank mixer
11 add. Recycle strainer
add. Storage tank mixer
1A FAC
2A FAC



1B scrubber make-up water pump
5A distribution cvy
MCC room PRV #1
HPR heater CP 111
#2 recycle feed cvy
Chimney lighting j-box #40
freeze protection panel
CAPB xfmr 4311
120/480v pp xfmr 4311
480v pp 4311
120/208v pp 4312
I/O rack cccc-pmc-14a
I/O rack casb-pmc-15a
I/O rack cbmc-pmc-14a
I/O rack cccc-pmc-15a

MCC-432 (13 MCC room)

			weld	weld	ID discharge damper		SDA inlet damper seal air fan	hopper heaters			
		SDA inlet damper	SDA bypass damper				SDA outlet damper seal air fan		xfmr-4321	freeze protection	
	2A SMUW pump					add. Rec. strainer	SDA bypass damper seal air fan		13A FAC		air heater cvy.
		SDA outlet damper			add. Feed tank mixer		MCC PRV-3		13B FAC		
seal air fan					13A add. Feed pump	reverse air fan		#1 pugmill paddle shaft			
					13B add. Feed pump			#1 pugmill feeder			

13 SDA inlet damper
13 SDA outlet damper
13 SDA bypass damper
13 SDA inlet damper seal air fan
13 SDA outlet damper seal air fan
13 SDA bypass damper seal air fan
13 ID fan discharge damper
13 ID fan seal air fan
13 reverse air fan
13A FAC
13B FAC
13 air heater cvy
13 add. rec strainer
13A add. feed pump
13B add. feed pump
13 add. feed tank mixer



13 MCC room PRV-3
13 SDA vent fan
#1 pugmill paddle shaft
#1 pugmill feeder
1A add. xfer pump
2B SMUW pump
2B FAC
#2 fly ash rec. feed pump
#2 fly ash rec. feed tank mixer
freeze protection panel 4321
welding receptacle
HPR heater cp 131
120/208 pp xfmr 4321
I/O rack CBMC-PMC-14B
I/O rack CCCC-PMC-34B
I/O rack CCCC-PMC-34A
I/O rack CASB-PMC-15B

MCC-COND. #6 (turbine desk area)

	lighting panel	plenum air damper panel	condensate reciever motor #2	power dist.panel 6	weld	weld	condensate reciever motor #1	
		UPS back-up	aux xmfr1a-25s	weld				
	lube oil transfer pump		aux xmfr1a-26s				5B main oil pump	
	emergency seal oil pump		hydraulic motor pump					
seal oil vacuum pump	turning gear		reserve tank vapor extractor				6-2 dirty water	6-1 dirty water
main seal oil pump	turning gear oil pump		gland seal vapor extractor				6 centrifuge	BFP hydraulic



6 turning gear oil pump
6 turning gear
6 main seal oil pump
6 emergency seal oil pump
6 seal oil vacuum pump
6 gland steam vapor extractor
6 centrifuge
5B MLOP
condensate reciever motor #1
condensate reciever motor #2
dirty water sump pump #1
dirty water sump pump #2
BFP #1M hydraulic coupling pump
hydraulic pump motor
lube oil transfer pump
motor space heater panel

station aux transformer 1A-25S
station aux transformer 1A-26S
step -up transformer 1A-1X
battery charger #2
supply fan #4
supply fan #5
lighting panel #4
UPS (back-up)
welding receptacle
welding receptacle
welding receptacle
plenum air damper panel
power distribution panel "G"
D.C. center electrical feeder
15KVA transformer feeder
15KVA transformer

MCC-COND. #5 (turbine desk area)

			lighting panel L3	weld	battery charger #1	weld		weld	main seal oil pump	battery charger 3	
	EUH-27										
	plenum air panel	dirty water sump 2			glad steam vapor extractor		15kVA xfmr feeder			5 L.O. vapor extractor	
			turbine oil drain pump #5				motor space heaters		seal oil vacuum pump	accumulator pump	
supply fan SF-1	lighting panel L2		jennings pump		dirty water sump 4				turning gear #5		
supply fan SF-2	supply fan SF-4		dirty water sump 3	dirty water sump 1			15kVA xfmr		cond. make-up pump	main A/C oil pump A	

5 vacuum pump
5 turning gear oil pump
5 main seal oil pump
5 turning gear
5 gland seal steam vapor extractor
5 reservoir vapor extractor
5A main oil pump
5 jennings pump
5 centrifuge
5 turbine drain pump
1A-25S station aux xfmr
1A-26S station aux xfmr
step-up xfmr 1A-2X
condensate make-up pump
accumulator pump
dirty water sump 1
dirty water sump 2
dirty water sump 3
dirty water sump 4



battery charger 1
battery charger 3
condenser pit starters 3,4,5,6
supply fan 2
supply fan 3
supply fan 4
D.C. center electric heater UH-27
plenum air damper panel
lighting panel 2
lighting panel 3
welding receptacles
welding receptacles
welding receptacles
CR-3 motor 1
CR-3 motor 2
15kVA xfmr feeder
15kVA xfmr
motor space heater panel

MCC-warehouse

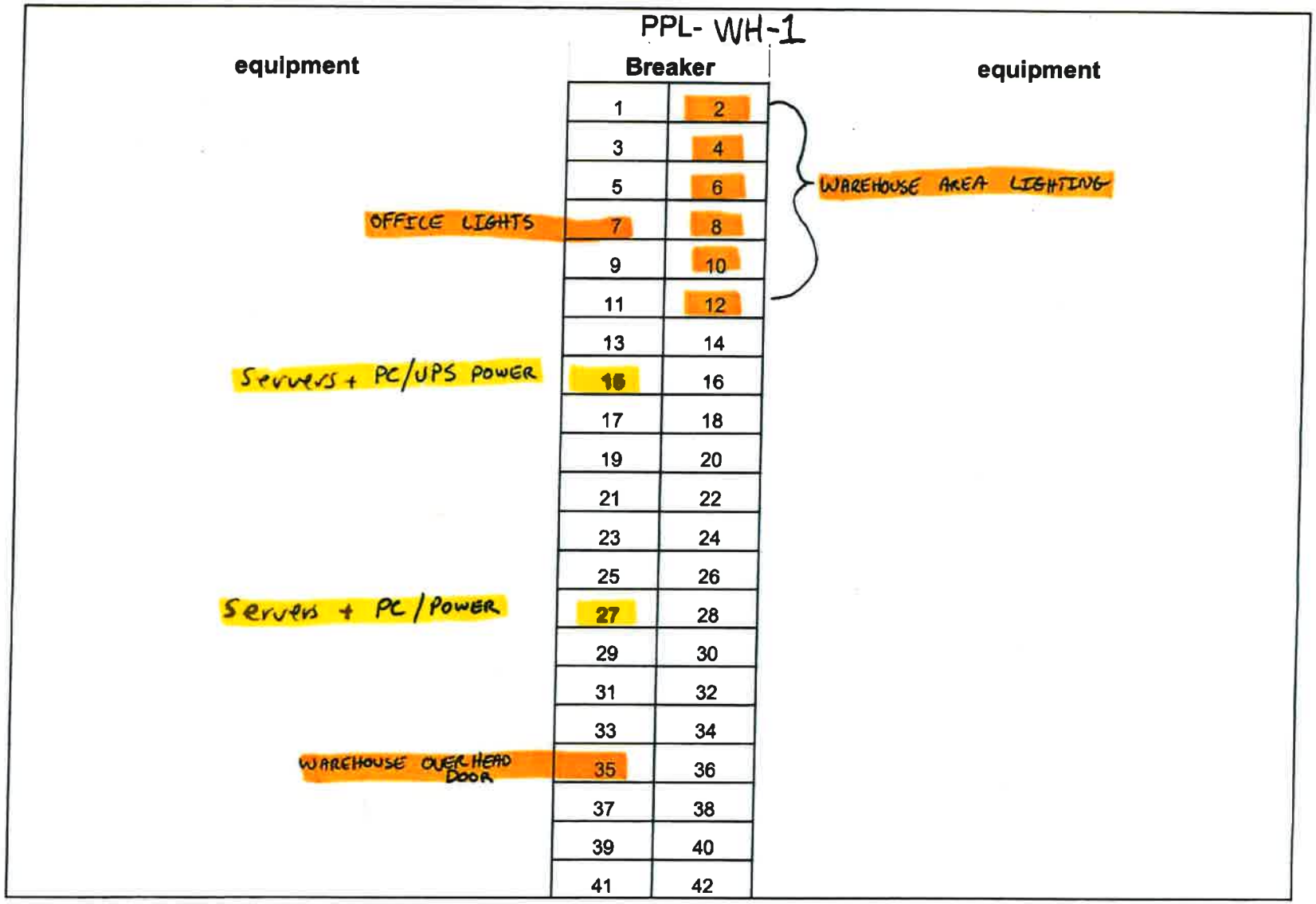
<table>
<tr><td colspan="2"></td><td>xfmr "ICE"</td><td>test bench E&I</td><td>warehou se roll-up door</td><td>weld</td><td></td><td>MCAP hoist</td><td></td></tr>
<tr><td>7S</td><td>7N</td><td colspan="3">fan deck panel</td><td></td><td>15kVA feeder</td><td>E&I heater</td></tr>
<tr><td>8W</td><td>8E</td><td colspan="3">EF-9</td><td></td><td colspan="2" rowspan="2">motor space heater panel</td></tr>
<tr><td colspan="2">EF-8</td><td colspan="3"></td><td></td></tr>
<tr><td colspan="2"></td><td colspan="2">oily waste heater 1 top</td><td>lighting HH-1</td><td>rooftop A/C</td><td rowspan="2">workshop MCC</td><td colspan="2" rowspan="2">15kVA xfmr</td></tr>
<tr><td colspan="2"></td><td colspan="3">oily waste heater 1 bottom</td></tr>
</table>

HEAT TRACE 90K/RECEIR

7N oily waste pump
7S oily waste pump
8E sanitary lift pump
8W sanitary lift pump
#1 oily waste separator heater
#2 oily waste separator heater
roof top A/C
warehouse over head door
fan deck panel

test cabinet E&I shop
exhaust fan 9
welding receptacles
lighting panel W-H 1
workshop MCC feeder
15kVA xfmr feeder
15kVa xfmr
xfmr ICE
MCAP hoist

Warehouse Panel PBF



MCC-ADMIN (north end of turbine deck)

<table>
<tr><td colspan="2"></td><td colspan="2"></td><td>dist. Panel Lg guard house</td><td></td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td>lighting panel A4</td><td>lighting panel A1</td><td>oil reservoir filter transfer pump</td><td rowspan="2">lighting</td><td>15kVA xfmr feeder</td><td>micro xfmr</td></tr>
<tr><td>2nd floor panel</td><td></td><td colspan="2"></td><td>gate gear</td><td rowspan="2"></td><td colspan="2" rowspan="2">motor space heater</td></tr>
<tr><td>admin elevator</td><td>4th floor panel</td><td colspan="2"></td><td></td><td></td></tr>
<tr><td colspan="2">turbine deck crane</td><td colspan="2">admin xfmr</td><td></td><td></td><td colspan="2">15kVA xfmr</td></tr>
</table>



oil reservoir return pump
turbine room crane
NU elevator
lighting panel PARKING LOT/ROADWAY LIGHTING
lighting panel A1
lighting panel A4
lighting xfmr admin building

2nd floor panel
4th floor panel
gate gear (gate20)
supply air fan #1
microwave xfmr
15kVA xfmr feeder
motor space heater power panel

CAPB-PPL-1231 (2nd floor south stairs to ash alley)

equipment	Breaker		equipment
rcpt side of panel	1	2	boiler camera 13
11 tangential OFA	3		empty
12 tangential OFA	5	6	RDF handling utility power
13 tangential OFA	7	8	RDF A/B control power
bathroom hotwater heater 208V	9	10	RDF A/B backup control power
	11	12	80K heat trace
13 CP utility	13	14	sample rack utility power
11 CP utility	15	16	rcpt side of panel
12 CP utility	17	18	MCC-422 motor space heater
12 SSC level probe	19	20	MCC-422 space heater
rcpt-outside by warehouse	21	22	SSC 13 local control power
rcpt-by demin/cond tanks	23	24	SSC motion switch
demin alternate control power	25	26	demin silica analyzer
	27	28	junction box outside demin
1B demin caustic pump	29	30	

CAPC-PPL-4211(3rd floor outside control room)

equipment	Breaker		equipment
control room duct heater	1	2	Spare
Spare	3	4	Spare
sootblower	5	6	11A/B vib. pans
13 soot steam IK power	7	8	11 C/D vib. pans
13 C/D vib. pans	9	10	12 A/B vib. pans
ash alley equipment lift	11	12	12 C/D vib. pans
11 soot steam IK power	13	14	13 A/B vib. pans

CAPB-PPL-1312 (12 MCC room)

equipment	Breaker		equipment
lime silo dut collector	1	2	
	3	4	
	5	6	OPC heater
	7	8	
	9	10	OPC heater
	11	12	
	13	14	CEM 240V outlet
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
coal pond building lighting	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	

CAPC-PPL-1311 (12 MCC room)

equipment	Breaker		equipment
1B slaker	1	2	12 atomizer oil skid
12 MCC room heater	3	4	12 add. feed room heater
12 penthouse hoist	5	6	12 penthouse vents
12 penthouse heaters	7	8	CCC-JBX-112
12 soot blower power (air heater)	9	10	CCC-JBX-113
	11	12	CCC-JBX-114
	13	14	

CAPB-PPL-4221 (2nd floor near elevator)

equipment	Breaker		equipment
main CPL turb 6 aux	1	2	main CPL turb 5 aux
turb aux relay panel	3	4	main CPL turb 6 aux
turb aux relay panel	5	6	sample rack
st gen 11 relay panel	7	8	sample rack
st gen 12 relay panel	9	10	sample rack
st gen 13 relay panel	11	12	12 phospate pump
turb aux relay panel	13	14	13 phospate pump
11 SSC dr control unit	15	16	6 sulfite pump (2B)
11 SSC chain motion	17	18	6 amine pump
12 SSC dr control unit	19	20	main CPL turb 5 aux
12 SSC chanin motion	21	22	main CPL turb 6 aux
MCC-121 I/O racks	23	24	elevator cart lighting
MCC-121 space heaters	25	26	main CPL turb 5 aux
MCC-121 motor space heaters	27	28	main CPL turb 6 aux
2A acid pump	29	30	demin sys CPL
	31	32	1A demin caustic pump
bot ash CPL	33	34	main CPL turb 6 aux
bot ash CPL	35	36	MCC-421 space heaters
gen bldg unit heater	37	38	
gen bldg unit heater	39	40	rcpt
	41	42	rcpt

CAPB-PPL-4211 (3rd floor outside control room)

equipment	Breaker		equipment
rcpt-Control room	1	2	boiler reel lights 11/12/13
rcpt-Control room	3	4	boiler camera 11/12
rcpt-Control room	5	6	rcpt-water analysis lab
rcpt-Control room cons	7	8	rcpt-water analysis lab
rcpt-supervisor office	9	10	rcpt-water analysis lab
rcpt-Kitchen nourishment center microwave	11	12	rcpt-water analysis lab regulating xfmr
rcpt- control equip. room wiring gallery	13	14	rcpt-dishwasher
soot blower control power 12	15	16	rcpt-refrigerator
svce-kitchen nourishment center surface range	17	18	rcpt-vacuum pump
	19	20	rcpt-deionizer cart
rcpt-kitchen nourishment center convience	21	22	rcpt-fume hood
rcpt-hot water heater control room bath room	23	24	
chem. mixer 11/12/13 PO4	25	26	rcpt-water analysis lab
chem. mixer amine/sulfite	27	28	
rcpt-lab hot water heater	29	30	CAPC-SUS-11
rcpt-kitchen nourishment ice maker	31	32	svce-kitchen nourishment center garbage disposal
CASA-CPL-1	33	34	soot blower control power 11
CAPD-CPL-1	35	36	bottom ash PLC 11
11 phosphate pump	37	38	soot blower control power 13
5 sulfite pump	39	40	rcpt-kitchen nourishment center refrigerator
5 amine pump	41	42	amine mixer

CAPC-LXF-1211 (3rd floor outside control room)

equipment	Breaker		equipment
ltg lab & lab storage	1	2	ltg control room fluor dimming power controller
ltg control room kitchen & supervisor office	3	4	ltg flour dimming control staion
ltg control euip room & wiring gallery	5	6	ltg lighting control LC-1 DC lighting
ltg chem lab sink area	7	8	ltg control room fluor dimming power controller
ltg boiler 11 el 64'-9.25", el 55'-0", el 45'-5"	9	10	ltg heater floor el 36'-7 1/4"
ltg south/west of boiler 11	11	12	ltg heater floor el 36'-7 1/4"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	13	14	ltg boiler 12 el64'-9 1/2", el 55'-0", el 45'-5"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	15	16	ltg boiler 12 el64'-9 1/2", el 55'-0", el 45'-5"
ltg boiler 13 el 64'-9 1/4", el 55'-0", el 45'-5"	17	18	ltg 12 SSC/ignitors
ltg boiler 11,12 el 31'-0"	19	20	ltg boiler 12,13 el 31'-0"
ltg boiler 11,12 el 31'-0"	21	22	ltg boiler 12,13 el 31'-0"
	23	24	ltg boiler 12,13 el 31'-0"
ltg chemical equip room	25	26	ltg neut basin
ltg bottom ash conveyor	27	28	ltg cable spreading room el 36'-7 1/4"
ltg swgr room 48'-5 1/8"	29	30	ltg shaker above 6th floor
	31	32	ltg boiler 12 stoker
	33	34	ltg boiler 12 stoker
	35	36	ltg boiler 12 stoker
ltg fixtures stoker level	37	38	emergancy DC lighting xfer sw
	39	40	
	41	42	

CAPC-PPL-4231 (6th floor near elevator)

equipment	Breaker		equipment
coal batch weigher 11A	1	2	coal batch weigher 13A
coal batch weigher 11B	3	4	coal batch weigher 13B
passenger elevator	5	6	north econ coil hoist
soot blower hoist	7	8	south econ coil hoist
RDF bay hoist	9	10	
	11	12	
12 Stop Valve MOV	13	14	13 Stop Valve MOV

SUS 21

MCC-211 (transfer building)

	xfmr	13 distribution spout	dozer garage feeder	RDF 519	dust coll. Panel	htr oil storage	tunnel exhaust PRV	coal cvy 1	discharge gate 12A	belt feeder 1	belt feeder #1 F&G LOH
main breaker					exhaust fan #2		sump slurry 1A	CAPB-xf-2111		belt feeder #1 FPG Fan	
		diverting spout #3	truck wash	RDF 515	exhaust fan #3		spout splitting roller 1		discharge gate 12B	coal cvy 4	en-masse cvy 5
		RDF 511					spout splitting roller 3		magnet separator		
				I/O rack			control room supply fan	coal cvy 3	coal cvy 1	coal cvy 2	I/O rack
			RDF 523		exhaust fan #4	CAPC-lxf-2111					

RDF 511
RDF 515
RDF 519
RDF 523
distribution spout 13
diverting spout 3
spout splitting roller #1
spout splitting roller #3
coal belt feeder #1
belt feeder #1 F&G LOH
belt feeder #1 FPG Fan
coal cvy 1
coal cvy 2
coal cvy 3
coal cvy 4
en masse cvy 5
en masse discharge gate 12A
en masse discharge gate 12B



Mag. Sep. #1 rectifier power supply
dust collector control panel #2
heater for oil storage room
sump slurry pump 1A
dozer garage feeder breaker
exhaust fan 2
exhaust fan 3
exhaust fan 4
tunnel exhaust fan PRV-1
xfer building control room supply fan #1
277/480v lp xfmr 2111
120/480v pp xfmr 2111
I/O rack CCHU-PMC-13
I/O rack CBMF-PMC-13

SUS 31

MCC-311 (transfer building)

EF-9	dust collector control panel 1		weld	13A en-masse		ppl-311	A/C		dist. spout 12	div. spout 4		
11A en-masse	13B en-masse	mag sep 3 power supply		coal div. gate 1	reclaim pit PRV-2		RDF 517		dist. spout 11			main breaker
11B en-masse		3B belt feeder			sump slurry 1B						RDF 521	
I/O rack		3A belt feeder		frozen coal granulator		exhaust fan 7	I/O rack		RDF 513	spout splitting roller 2		
	coal cvy. 3 mag sep.				exhaust fan 5					exhaust fan 6	RDF 525	
											spout splitting roller 4	

xfmr

RDF 513
RDF 517
RDF 521
RDF 525
11 distribution spout
12 distribution spout
diverting spout 4
spout splitting roller #2
spout splitting roller #4
coal cvy. 3 mag sep.
3A coal belt feeder
3B coal belt feeder
coal diverter gate 1
en masse discharge gate 11A
en masse discharge gate 11B
en masse discharge gate 13A
en masse discharge gate 13B



mag. sep. #3 rectifier power supply
frozen coal granulator
dust collector control panel #1
control room A/C unit heat coils (transfer building)
1B sump slurry pump
reclaim pit PRV-2
exhaust fan 5
exhaust fan 6
exhaust fan 7
480v ppl-3111
120/208v pp xfmr 3111
I/O rack CCHU-PMC-14
I/O rack CBMF-PMC-23

CAPH-PPL-1 (4160 room) *NOTE, 125 VDC

equipment	Breaker		equipment
swgr bus 1 control	1	2	swgr bus 2 control
	3	4	
swgr bus 3 control	5	6	swgr bus 4 control
	7	8	
SUS 12-42 brkr control	9	10	
	11	12	
SUS 13-43 brkr control	13	14	SUS 21 brkr control
	15	16	
emergancy ltg swgr room, cable spreading	17	18	SUS 31 brkr control
	19	20	
stm gen 11 relay panel CCOF-RPL-111	21	22	stm gen 12 relay panel CCOF-RPL-121
	23	24	
stm gen 13 relay panel CCOF-RPL-131	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	

CAPB-PPL-1211 (4160 room)

equipment	Breaker		equipment
MCC-121 i/o racks	1	2	
	3	4	
rcpt switchgear room	5	6	
rcpt switchgear room	7	8	CCCE-CDR-1 space heater
rcpt cable spreading room	9	10	CCCE-CDR-2 space heater
rcpt cable spreading room	11	12	CCCE-CDR-3 space heater
CSGB-FD-12 bearing heater	13	14	CCCE-CDR-37 space heater
CCCE-ID-12 bearing heater	15	16	CCCE-CDR-38 space heater
	17	18	CCCE-CDR-39 space heater
CCCE-ID-13 bearing heater	19	20	CSCA-CPL-1
	21	22	CSCC-CPL-1
CAPC-SUS-12	23	24	CSGB-FD-11 bearing heater
swgr 1 space heater	25	26	swgr 3 spaceheater
	27	28	
	29	30	
swgr 3 space heater	31	32	swgr 4 space heater
	33	34	
	35	36	

CAPC-LPL-1311 (12 MCC room)

equipment	Breaker		equipment
ltg scrubber control building laboratory	1	2	ltg scrub control build control room
ltg scrub control build ext.	3	4	ltg scrub control build control room
ltg scrub control build emerg. lighting	5	6	ltg scrub control build HVAC eqpt room
ltg distr cnvr el 51'-9"	7	8	ltg pugmill building el 49'-6" thru 75'-0"
ltg ash storage building (6B) el 49'-9"	9	10	ltg pugmill building el 49'-6" thru 75'-0"
ltg ash storage building (6B) el 49'-9"	11	12	ltg pugmill building el 49'-6" thru 75'-0"
ltg ash storage building (6B) el 29'-0"	13	14	ltg air qual control baghouses el 29'-6" thru 74'-2"
ltg slaker building and lime silo	15	16	ltg air qual control baghouses el 29'-6" thru 74'-2"
	17	18	ltg air qual control baghouses el 29'-6" thru 74'-2"
ltg air qual cont absorbers el 29'-6" thru 122'-4.25"	19	20	ltg pugmill building outside
ltg air qual cont absorbers el 29'-6" thru 122'-4.25"	21	22	ltg 11 MCC room and add. feed room
ltg air qual cont absorbers el 29'-6" thru 122'-4.25"	23	24	ltg 12 MCC room and add. feed room
ltg 11 penthouse	25	26	ltg 13 MCC room and add. feed room
ltg 12 penthouse	27	28	control circuit for contactor for outside lights
ltg 13 penthouse	29	30	control circuit for ash pugmill building contactor for lights
	31	32	
	33	34	
	35	36	ltg pugmill building el 29'-6"
	37	38	
	39	40	
	41	42	

CAPB-PPL-1311 (12 MCC room)

equipment	Breaker		equipment
rcpt baghouse 12 el 29'-6"	1	2	ltg 12 penthouse
rcpt baghouse 12 el 52'-7.25"	3	4	ltg 12 penthouse
rcpt baghouse 12	5	6	rcpt 12 penthouse
rcpt 12 MCC room and add. feed room	7	8	CSGB-CDR-5 space heater
rcpt 12 MCC room and add. feed room	9	10	CSGB-CDR-8 space heater
CAPC-MCC-131	11	12	MCC-131 space heater
CAPC-MCC-131	13	14	MCC-131 motor space heater
CCCC-TPL-12	15	16	MCC-131 I/O rack
CCCC-TPL-12	17	18	MCC-131 I/O rack
CCCC-TPL-12	19	20	MCC-131 I/O rack
CCCC-SGC-2	21	22	MCC-131 I/O rack
CCCC-FE-28	23	24	12 baghouse plattco power
CCCC-CPL-12	25	26	CCCC-IRK-125
CCCC-SMG-25	27	28	CAPC-MCC-131
CMBC-FT-10,13,16	29	30	12 opacity monitor

CAPH-LPL-1 (3rd floor outside control room)

equipment	Breaker		equipment
ltg wiring gallery & control equipment room, cable spreading & mod 300 rack room	1	2	ltg coal handling & RDF cascade conveyor areas
ltg stair twr 1 elevator stairway	3	4	ltg coal handling & RDF cascade conveyor areas
ltg stair twr 3 south wall & stairway	5	6	ltg boilers 11,12 & 13 east area & lab exit phospate tank area
ltg stair twr 2 & control room exits, control room stairway & exits	7	8	ltg boilers 11,12 & 13 west area
	9	10	ltg control room
	11	12	ltg control room
	13	14	
	15	16	
	17	18	
	19	20	

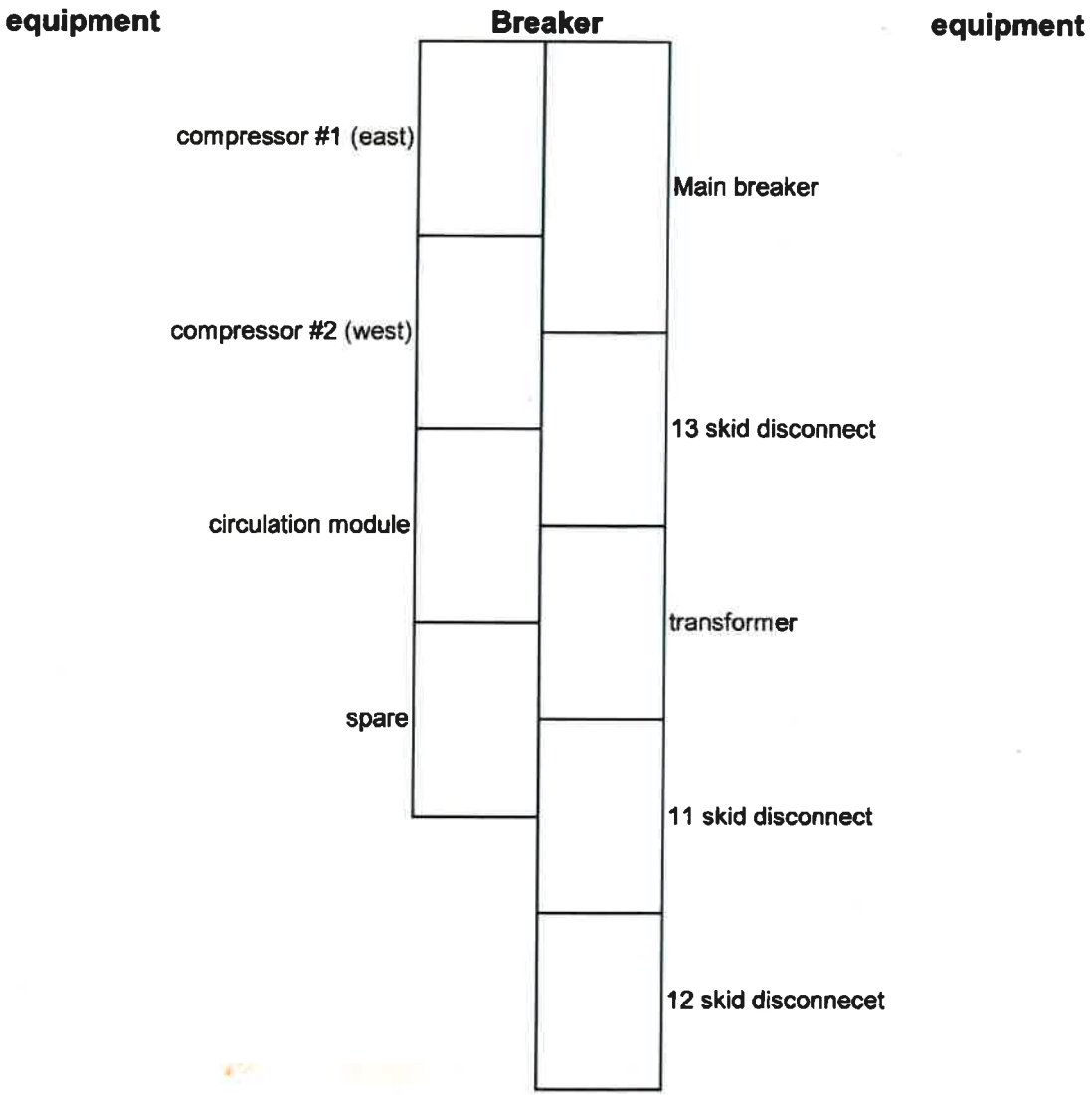
CAPC-PPL-1233 (2nd floor near south stairs)

equipment	Breaker		equipment
13A coal dist.	1	2	13C coal dist.
	3	4	
13B coal dist.	5	6	13D coal dist.
	7	8	
A/B interlock	9	10	C/D interlock
	11	12	
	13	14	
	15	16	
	17	18	
	19	20	
	21	22	
2B acid pump	23	24	
	25	26	
spare	27	28	
	29	30	

CAPC-LPL-1221 (6th floor south of 12 boiler) *NOTE, LIGHTING CIRCUITS/BOILERS

equipment	Breaker		equipment
ltg boiler 11 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	1	2	ltg boiler 12 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"
ltg boiler 11 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	3	4	ltg boiler 12 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"(front of elevator 8/9th)
ltg boiler 11 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	5	6	ltg boiler 12 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"
ltg boiler 13 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	7	8	ltg boiler 11 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"
ltg boiler 13 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	9	10	ltg boiler 11 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"
ltg boiler 13 el 145'-0", el 125'-3 1/2", el 116'-3 1/2"	11	12	ltg boiler 11 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"(south of 11)
ltg boiler 12 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"	13	14	ltg boiler 13 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"
ltg boiler 12 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"	15	16	ltg boiler 13 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"
ltg boiler 12 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"	17	18	ltg boiler 13 el 104'-3 1/2", el 89'-3 1/2", el 73'-9 1/2"(north side 13, 7th)
ltg en-masse chain coal conveyor gallery el 125'-3 1/2"	19	20	catwalk lights
ltg en-masse chain coal conveyor gallery el 125'-3 1/2"	21	22	
4th floor shaker lights	23	24	
emergancey stair case lighting	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	

NALCO/Fuel tech (6th floor south of 13 boiler)



CAPC-LPL-2111 (transfer building 1st floor)

*NOTE; LIGHTING PANEL CIRCUITS

equipment	Breaker		equipment
ltg transfer building electric equipment room & misc	1	2	ltg transfer building
ltg transfer building control room & stairs	3	4	ltg transfer building
ltg transfer building egress & misc (emergancy)	5	6	ltg transfer building (exit/emergancy lights)
ltg coal cvy 4 gallery	7	8	ltg reclaim pit & tunnel egress
ltg coal cvy 1 gallery	9	10	ltg reclaim tunnel
ltg RDF cvys 511/513 gallery	11	12	ltg reclaim pit
ltg RDF cvys 511/513 gallery	13	14	ltg coal cvy 3 gallery
ltg RDF cvys 511/513 gallery	15	16	ltg transfer building egress & misc
ltg RDF cvys 511/513 gallery	17	18	ltg coal cvy 3 gallery
ltg RDF cvys 515/517 gallery	19	20	ltg coal cvy 2 tower
heated hose cabinet CCHB-CPL-3	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	ltg roadway
	39	40	ltg roadway
	41	42	ltg roadway

CIRCUITS ARE OFF.

CAPB-PPL-2111 (transfer building 1st floor)

equipment	Breaker		equipment
rcpt transfer building hazardous areas	1	2	rcpt transfer building electric equipment room
rcpt transfer building hazardous areas	3	4	rcpt transfer building control room, toilet
rcpt reclaim pit, tunnel and conveyor 3 gallery	5	6	rcpt transfer building HVAC equipment room
rcpt reclaim pit, tunnel and conveyor 3 gallery	7	8	rcpt conveyor 2 gallery
rcpt reclaim pit, tunnel and conveyor 3 gallery	9	10	rcpt conveyor 1 gallery
rcpt conveyor 4 gallery	11	12	rcpt conveyor 511/523
rcpt conveyor 511/513 gallery	13	14	
rcpt conveyor 511/513 gallery	15	16	rcpt conveyor 511/513
rcpt conveyor 511/513 gallery	17	18	rcpt conveyor 515/517
transfer building page	19	20	rcpt conveyor 515/517
CCHB-CVY-3A	21	22	instantaneous water control room toilet
MCC 211 I/O racks	23	24	spare
MCC 211 I/O racks	25	26	CEEA-JBX-0177
MCC 311 motor space heaters	27	28	CEEA-JBX-0178
MCC 311 space heaters	29	30	SUS 31 space heater
CCHH-MON-12345&6	31	32	CCHU-CPL-1
CBMF-CVY-511 sp red mtr	33	34	CBMF-TVC-B-7
et-46 reclaim area	35	36	CCHB-CPL-D-4
	37	38	ET-32/34
ET-3	39	40	
	41	42	spare

panel L-5 (outside old air comp. room) * NOTE, LIGHTING CIRCUITS

equipment	Breaker		equipment
ltg machine shop	1	2	ltg machine shop + 1 EP
ltg machine shop + 1 EP	3	4	ltg machine shop
ltg machine shop	5	6	ltg machine shop + 1 EP
fire alarm turbine panel	7	8	ltg el 37'-0"
fire alarm turbine panel	9	10	ltg el 37'-0"
CWP 5S motor space heater	11	12	ltg el 37'-0"
CWP 6S motor space heater	13	14	rcpt el 31'-0" boiler
ltg el 26'-0"	15	16	rcpt el 31'-0" boiler
ltg el 26'-0"	17	18	CWP 5N motor space heater
rcpt el 26'-0"	19	20	CWP 6N motor space heater
rcpt tool room in machine shop	21	22	rcpt el 26'-0"
recpt el 26'-0"	23	24	ltg el 36'-7 1/2"
ltg 31'-0" boiler area	25	26	ltg el 31'-0" boiler area
ltg el 31'-0" boiler area	27	28	ltg el 31'-0" boiler area
ltg el 31'-0" boiler area	29	30	ltg el 31'-0" boiler area
ltg el 31'-0" boiler area	31	32	sfmr relay panel 1A-25S
ltg el 31'-0" boiler area	33	34	gen. relay panel 1A-5U
ltg el 31'-0" boiler area	35	36	fire alarm boiler panel
ltg circ water tunnel piping	37	38	rcpt circ water tunnel
	39	40	ltg circ water tunnel piping
	41	42	fire alarm boiler panel

panel E-2 (admin 2nd floor south end of mens locker room)

equipment	Breaker		equipment
ltg 2nd floor locker room + 3P	1	2	ltg 2nd floor corr confr computer + 3 BP
ltg 2nd floor locker room + 3P	3	4	ltg 2nd floor office + 2 BP
spare	5	6	ltg 2nd floor file storage room
ltg 2nd floor confr room, computer + 1 BP	7	8	spare
ltg 2nd floor mens toilet & shower	9	10	ltg 3rd floor corr, stair
	11	12	
	13	14	
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	

panel E-1 (admin 1st floor by south stairs) *NOTE, LIGHTING CIRCUITS

equipment	Breaker		equipment
	1	2	
	3	4	
	5	6	
	7	8	
	9	10	
	11	12	
	13	14	
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
	31	32	
	33	34	
	35	36	
	37	38	
	39	40	
	41	42	

CAPC-PPL-1231 (3rd floor outside control room)

equipment	Breaker		equipment
Heater mechanical lab crawel space	1	2	Outside rcpt
spare	3	4	spare
12 soot steam IK power	5	6	spare
rlg steel door	7	8	Dolo system/lime silo
12A batch weigher	9	10	12B batch wiegher
electro magnet/conveyor	11	12	spare
portable weld cord outside demin	13	14	spare

CAPB-PPL-4231 (6th floor near elevator)

equipment	Breaker		equipment
rcpt-boiler area col E1-29 above 64'-9.5"	1	2	rcpt-boiler area col E1-41 above EL 64'-9.5"
rcpt-boiler area col E1-32 above 64'-9.5"	3	4	rcpt-boiler area col E1-45 above EL 64'-9.5"
rcpt-RDF cascade cvy area	5	6	rcpt-RDF cascade cvy area
rcpt-lighting elevator pit and elev. equip. room	7	8	rcpt-boiler area col E1-29 above EL 64'-9.5"
rcpt-bottom ash cvy area	9	10	rcpt-boiler area col E1-34 above EL 64'-9.5"
service to drum gauge 11	11	12	rcpt-boiler area col E1-41 above EL 64'-9.5"
service to drum gauge 12	13	14	rcpt-boiler area col E1-45 above EL 64'-9.5"
service to drum gauge 13	15	16	
	17	18	11 O2 probe
	19	20	12 O2 probe
	21	22	MCC-423 space heater
13 O2 probe	23	24	MCC-423 motor space heater
auger hydraulic unit 11	25	26	MCC-122 motor space heater
auger hydraulic unit 12	27	28	MCC-122 space heater
auger hydraulic unit 13	29	30	
12 O2 probe (south)	31	32	
	33	34	
	35	36	eye hye's 11/12/13
11 soot steam 7th floor panel control power	37	38	11 total air flow box heater
	39	40	12 total air flow box heater
emergance strobe lights	41	42	13 total air flow box heater

CAPC-PPL-4311 (11 MCC room)

equipment	Breaker		equipment
1A slaker	1	2	11 atomizer oil skid
11 penthouse heaters	3	4	11 penthouse vents
11 MCC room heater	5	6	11 MCC room vent
	7	8	
HVAC room heater	9	10	sewage lift staion
slaker building heaters	11	12	12 add. feed room heaters
	13	14	11 penthouse hoist

CAPB-PPL-4312 (11 MCC room)

equipment	Breaker		equipment
recpt baghouse 12 el. 29'-6"	1	2	lighting to 11 penthouse
recpt baghouse 12 el. 52'-7.25"	3	4	lighting to 11 penthouse
recpt baghouse 12	5	6	recpt 11 penthouse
recpt 11add. feed room and MCC room	7	8	CSGB-CDR-4 space heater
recpt 11add. feed room and MCC room	9	10	CSGB-CDR-7 space heater
CCCC-SGC-1	11	12	11 atomizer slurry flow mete
CCCC-TPL-11	13	14	MCC-431 I/O rack
CCCC-TPL-11	15	16	MCC-431 I/O rack
CCCC-TPL-11	17	18	MCC-431 I/O rack
MCC-431 I/O rack	19	20	MCC-431 space heater
MCC-431 I/O rack	21	22	MCC-431 motor space heater
MCC-431 I/O rack	23	24	11 Baghouse plattco power
CASB-CPL-1	25	26	CCCC-IRK-115
CCCC-SMG-24	27	28	CSAA-ANZ-10
CBMC-FT-9,12,15	29	30	panel recept

CAPC-PPL-4321 (13 MCC room)

equipment	Breaker		equipment
13 penthouse hoist	1	2	
ash xfr tower UH 2	3	4	13 add. feed room heater
13 penthouse heaters	5	6	ash xfr tower UH 1
13 MCC room heaters	7	8	13 atomizer oil skid
CCCC-JBX-115	9	10	CCCC-JBX-116
ash xfr tower UH 3	11	12	ash xfr tower UH 4
CCCC-JBX-117	13	14	

CAPB-PPL-4321 (13 MCC room)

equipment	Breaker		equipment
rcpt distr cnvr el 51'-9" and ash storage bulding el 29'-6"	1	2	rcpt pugmill building
rcpt ash storage building el 49'-6"	3	4	rcpt pugmill building
rcpt ash storage building el 49'-6"	5	6	rcpt pugmill building
rcpt 13 MCC room and add. feed room	7	8	rcpt upper baghouse 13
rcpt 13 MCC room and add. feed room	9	10	rcpt air qual cont baghouse 13
CAPC-MCC-432	11	12	rcpt 12 pre heater
CCCC-TPL-13	13	14	rcpt air qual cont absorbers el 29'-6" thru 122'-4.25" (13 preheat)
CCCC-TPL-13	15	16	rcpt air qual cont absorbers el 29'-6" thru 122'-4.25" (11 preheat)
CCCC-TPL-13	17	18	rcpt air qual cont absorbers el 29'-6" thru 122'-4.25"
rcpt 13 penthouse	19	20	CSGB-CDR-6 space heater
lighting 13 absorber port lighting	21	22	CSGB-CDR-9 space heater
lighting 13 absorber port lighting	23	24	CCCC-CPL-13
CAPC-MCC-432	25	26	CAPC_MCC-432
CCCC-SGC-3	27	28	CSAA-ANZ-12
CCCC-FE-29	29	30	CCCC-IRK-135
CCCC-SMG-26	31	32	pugmill vibrators
CBMC-FT-11,14,17	33	34	13 plattco power supply
CBMC-SGC-11,17	35	36	MCC 432 space heater
MCC 432 I/O rack	37	38	MCC 432 motor space heater
MCC 432 I/O rack	39	40	MCC 432 I/O rack
MCC 432 I/O rack	41	42	MCC 432 I/O rack

CAPI-PPL-2 (scrubber control room)

equipment	Breaker		equipment
CASB-PMC-1A	1	2	CASB-PMC-1B
CBMC-CPL-1	3	4	CBMC-CPL-1
CCOA-CAB-3	5	6	CCOA-CAB-3
CCOA-CAB-5	7	8	CCOA-CAB-3
	9	10	CCOA-CAB-3
CBMC-CPL-1	11	12	CCOF-CPL-211
CCOF-CPL-213	13	14	CCOF-CPL-211
CCOF-CPL-213	15	16	CCOF-CPL-212
	17	18	CCOF-CPL-212
CCOF-CPL-211	19	20	CCOF-CPL-212
CCOF-CPL-213 I/O	21	22	Altech process drms
	23	24	

CAPB-PPL-4311 (scrubber control room)

equipment	Breaker		equipment
rcpt kitchen nourishment center	1	2	rcpt scrubber control room
ltg & rcpt toilet & exh fan	3	4	rcpt scrubber control room
washing machine	5	6	hot water heater
rcpt kitchen nourishment center refrigerator	7	8	
spare	9	10	spare
	11	12	spare
spare	13	14	rcpt additive prep building (upper power washer)
spare	15	16	rcpt additive prep building
spare	17	18	CASB-CPL-1
CCOF-CPL-213	19	20	CASB-CPL-1
CBMC-CPL-1	21	22	CMBC-CPL-1
CBMC-CPL-1	23	24	CMBC-CPL-1
CBMC-CPL-1	25	26	
scrub cp rcpt	27	28	CCOF-CPL-211
clothes dryer	29	30	CCOF-CPL-211
	31	32	CSCB-CPL-1
SUS 13-43 space heater	33	34	spare
CSAA-CAB-1	35	36	CCOF-CPL-212
CBMC-SGM-19,20 (slaker steam heater/silo level)	37	38	CCOF-CPL-212
CCOF-CPL-213	39	40	
spare	41	42	

CAPC-PPL-3111 (transfer building 1st floor)

equipment	Breaker		equipment
gate opener	1	2	480V power plug on 4th floor
fire protection room heater	3	4	wet supress room heater
HVAC room heater	5	6	telescopic chute control panel
glycol system CPL	7	8	dust spress CPL
transfer building hoist	9	10	control room AC unit 1 (transfer building)

CAPB-PPL-311 (transfer building 1st floor)

equipment	Breaker		equipment
MCC 211 motor space heater	1	2	MCC 311 I/O racks
MCC 211 space heater	3	4	CBSM-CPL-1
SUS 21 space heater	5	6	CCHA-CPL-2
SECN 120	7	8	CCHU-CPL-2
coal handling CP rcpt	9	10	CCHA-SGM-27 &28
CCHU-CPL-1	11	12	CCHA-CPL-3
CCHH-SGM-33,34,35	13	14	CCHU-CPL-1
CCHH-CPL-7	15	16	CCHB-SGM-29 & 30
MCC 311 I.O racks	17	18	CCHB-SGM-31 & 32
CCHAK2001A25	19	20	CCHB-SGM-38
CCHBK2001A20	21	22	CCHB-PKXX-16
gate 40 TV camera ckt 003	23	24	CCHU-CPL-1
ET-68	25	26	
ET-44	27	28	oil rack pump outlet
	29	30	overhead door

MCC-workshop

<table>
<tr><td colspan="2"></td><td>24" lathe starter</td><td>power W/E side</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td>milling machine starter</td><td>weld</td><td>bench grinder starter/band saw starter</td><td>surface/bench grinder starter</td></tr>
<tr><td colspan="2">exhaust fan EF-11</td><td>drill press starter</td><td>large drill press</td></tr>
<tr><td></td><td>fire pump</td><td colspan="2"></td></tr>
<tr><td colspan="2"></td><td colspan="2"></td></tr>
</table>



milling machine starter
welding receptacles
exhaust fan EF-11
6-EL
large drill press
drill press starter
24" lathe starter
power west side panel
power east side panel

band saw starter
bench grinder starter 1
surface grinder starter
bench grinder starter 2
fire pump

MCC-screenhouse #3

		electric heat 17		electric heat 19	electric heat 20	electric heat 15	electric heat 16		
electric heat 18		lighting	weld	electric heat 13	electric heat 14	SW 1A screen		15KVA feeder	
exhaust fan 17		5 CW sump pump		dewatering pump 1A		SW 1B screen		motor space heater	
service water sump		SW 1A discharge valve		CW 5N discharge valve		exhaust fan 18			
5S screen									
5N screen		SW 1B discharge valve		CW 5S discharge valve					



5N CW pump discharge valve
5S CW pump discharge valve
1B SW pump discharge valve
1A SW pump discharge valve
service water sump pump
CW sump pump
5N traveling screen
5S traveling screen
1A traveling screen
1B traveling screen
electric unit heater 8
electric unit heater 13
electric unit heater 14
electric unit heater 15
electric unit heater 16
electric unit heater 17
electric unit heater 19
electric unit heater 20
exhaust fan 17
exhaust fan 18
lighting panel SO3
welding recepticles
motor space heater power panel
15KVA xfmr feeder
15KVA xfmr

MCC-screenhouse #1

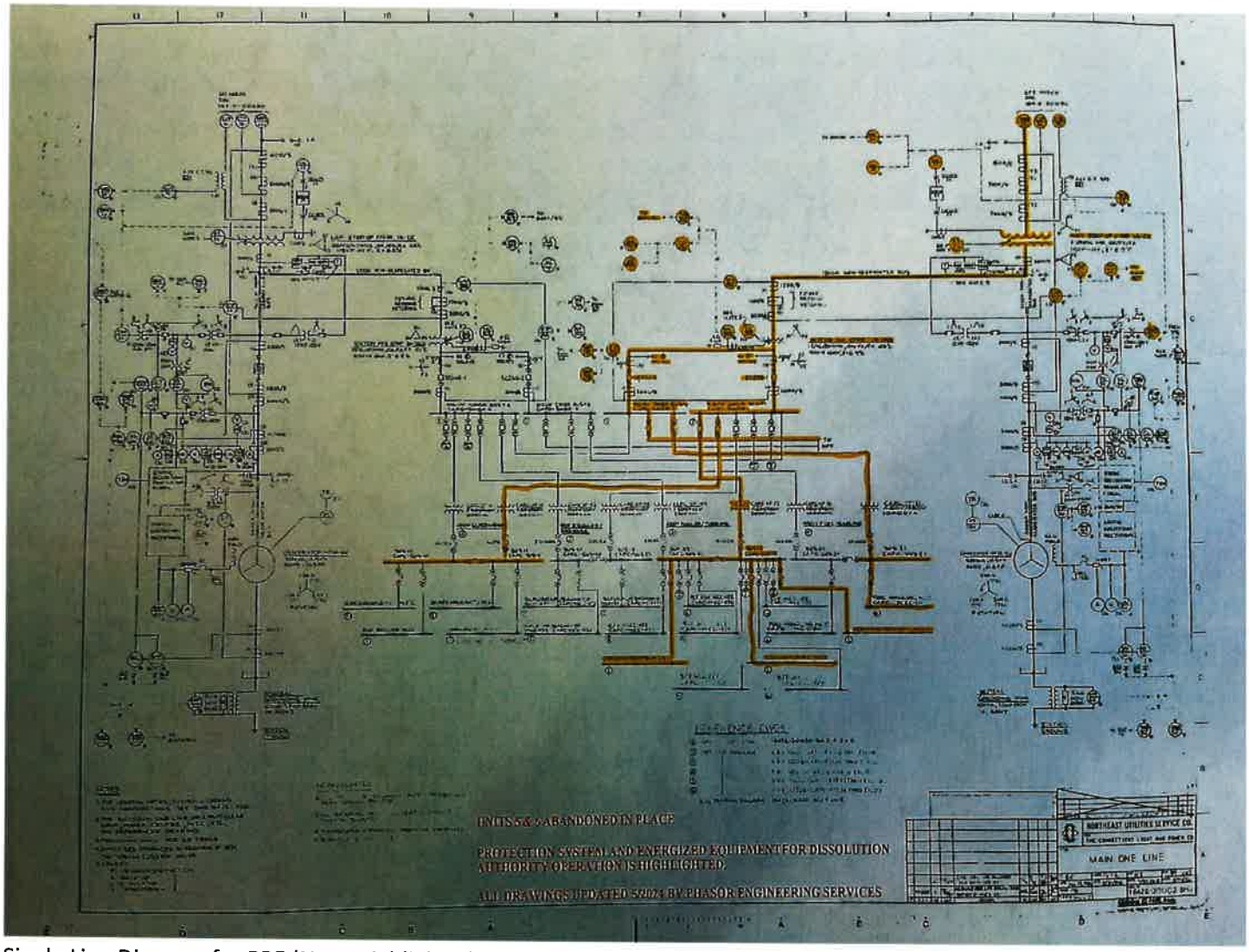
	lighting	EUH 1	EUH 4	EUH 6		
6S screen	EUH 2	EUH 3	weld		15kVA xfmr	parking lot lights
6N screen	exhaust fan 16		6 CW sump pump		motor space heater	
6N CWP discharge			1B dewater pump			
6S CWP discharge					15kVA xfmr	



6N CWP discharge valve
6S CWP discharge valve
6N CW traveling screen
6S CW traveling screen
circ water sump pump
1B dewatering pump
electric unit heater EUH-1
electric unit heater EUH-2
electric unit heater EUH-3
electric unit heater EUH-4
electric unit heater EUH-6

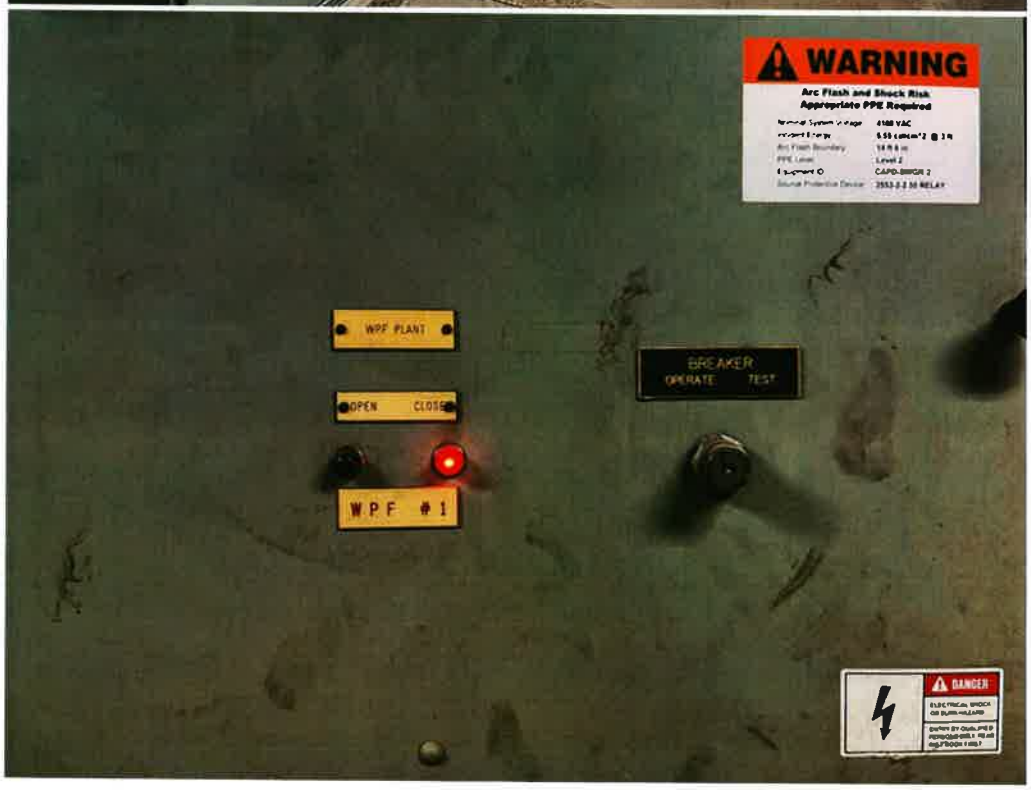
exhaust fan 16
welding recepticales
lighting panel SCI
15kVA xfmr feeder
15kVA xfmr
motor space heater power panel

WPF Electrical Inventory

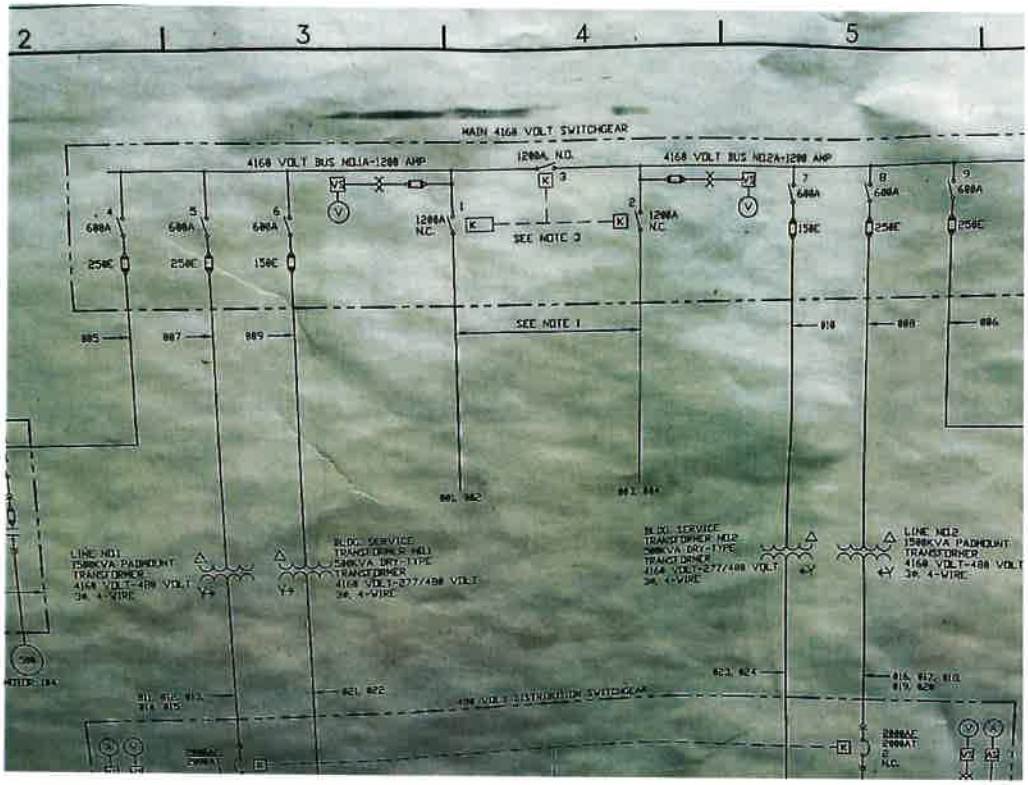


Single Line Diagram for PBF (Note Highlighted Feed from 4160 Switchgear to WPF)





Feed to WPF (located in PBF 4160 room)



Single Line Diagram located in WPF 4160 room



Incoming 4160 Feed in WPF 4160 Room from PBF 4160 Room



4160 Tie within WPF 4160 Room



Feed to 1500KVA Transformer Located Outdoors, West of WPF Processing Area



1500KVA Transformer that Feeds 480 Room



Feed to 500KVA Transformer Located within WPF 4160 Room



500KVA Transformer Located within WPF 4160 Room



480V Switchgear within WPF 4160 Room that is Fed by 500KVA Transformer.





480 Feeds to WPF Admin Building and WPF Warehouse Located in 4160 Room.



Feed to WPF Sump Pump and WPF Gate Panels Located within WPF 480 Room. (Panels Located North of RDF Building)

Updated Electrical One Line Drawings

June 18, 2024

ATTN: MIRA Dissolution Authority
(Formerly Materials Innovation and Recycling Authority)
300 Maxim Road
Hartford, CT 06114

Subject: Dissolution Drawing Package

Dear Mr. Bodendorf:

Phasor Engineering Services was called to provide updated drawings to highlight abandoned equipment, and energized equipment for use of the necessary protection and lighting systems for the dissolution authority. All drawings included and noted below were updated in May of 2024.

Drawing Package

Drawings used and updated to show current state of 300 Maxim Road generation facility include:

1. 16410-91001 - South Meadow 1A – 115kV Nomenclature Diagram
2. 16426-30002 - Main One Line
3. 16424-30001 Sh. 1 – One Line Metering and Relaying, Units 11 and 12
4. 16424-30001 Sh. 2 – One Line Metering and Relaying, Units 13 and 14
5. 16426-30004 Sh. 1 to 5 – 480V MCC One Lines
6. 16426-30005 – UPS and DC One Line Diagram

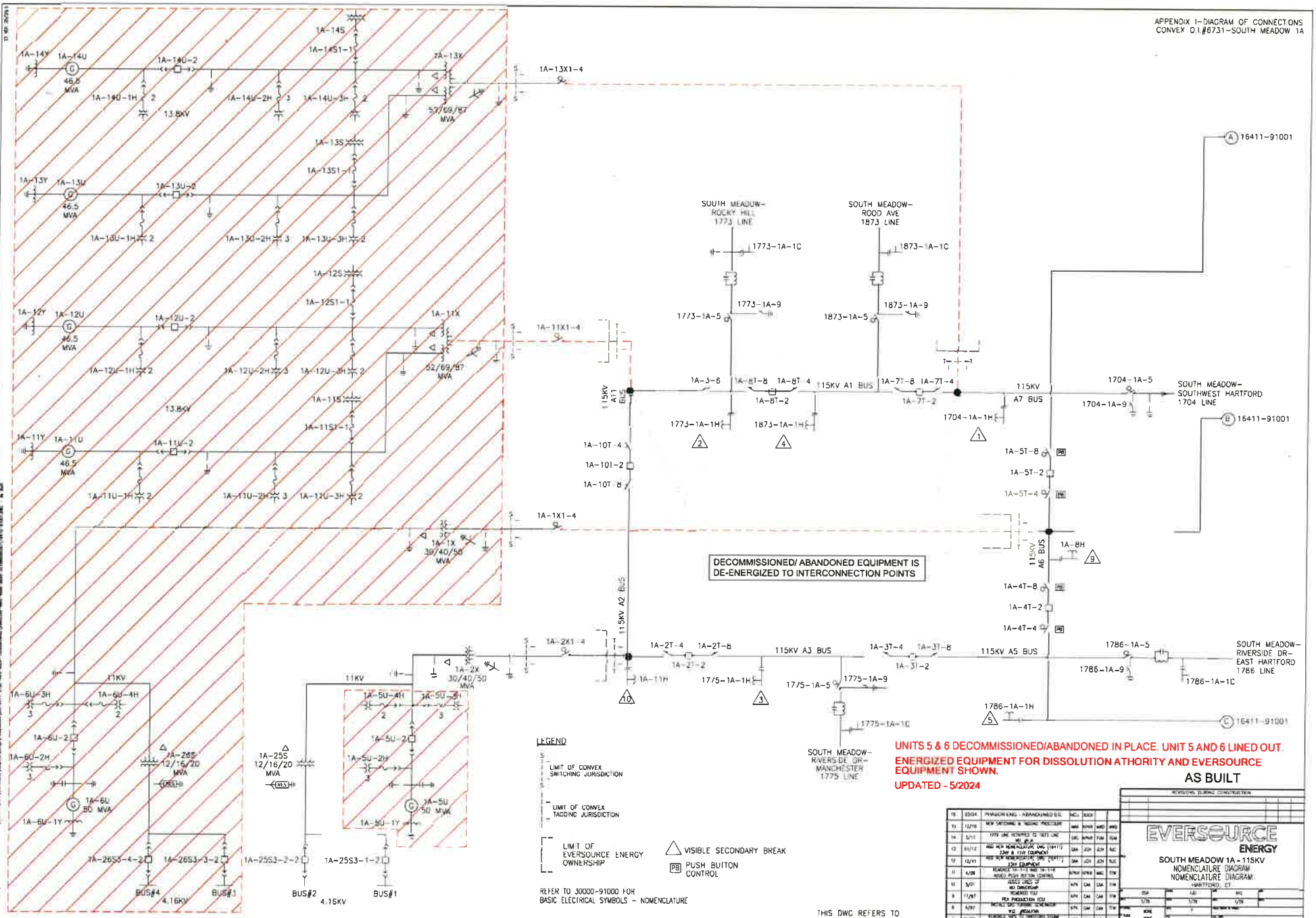
All drawings outlined above were updated in May 2024 by Phasor Engineering Services.

Should you have any questions or comments, please do not hesitate to contact me. I may be reached via cellular at (860) 948-0560.

Sincerely,

Nicholas Jansen
Field Service Engineer
Phasor Engineering Services

APPENDIX I–DIAGRAM OF CONNECTIONS
CONVEX O.I.#6731–SOUTH MEADOW 1A



UNITS 5 & 6 DECOMMISSIONED/ABANDONED IN PLACE. UNIT 5 AND 6 LINED OUT.
ENERGIZED EQUIPMENT FOR DISSOLUTION ATHORITY AND EVERSOURCE EQUIPMENT SHOWN.

AS BUILT

UPDATED - 5/2024

15	2024	PHASING/NO. - ABANDONED EQ.	MCL	DOH		
13	12/19	NEW SWITCHING & TAGGING PROCEDURE	MAB	BJW	MRD	MRD
14	5/13	1779 LINE RETIRED TO TIETI LINE NO. 81-2	LBL	BJW	TJM	RJM
13	04/12	ADD NEW NOMENCLATURE DWG (1911) 23kV & 11kV EQUIPMENT	SAK	JDH	JDH	RJC
12	12/11	ADD NEW NOMENCLATURE DWG (1911) 23kV EQUIPMENT	SAK	JDH	JDH	RJC
11	4/08	REVISED 16-1-1 AND 16-1-6 ADDED PUSH BUTTON CONTROL	BJW	BJW	MRC	TJM
10	5/01	ADDED LINES OF NU OWNERSHIP REVISED TO1	BJW	DAK	DAK	TJM
9	11/97	PER PRODUCTION ECN	BJW	DAK	DAK	TJM
8	4/97	REVISED SWITCHING NOMENCLATURE P.O. #0041479	BJW	DAK	DAK	TJM
7	11/95	REVISED TAPS TO HARTFORD STEAM PER COMPASS NO BASIC REVISIONS	BJW	DAK	DAK	TJM
NO.	DATE		BY	CHK	APP	APP

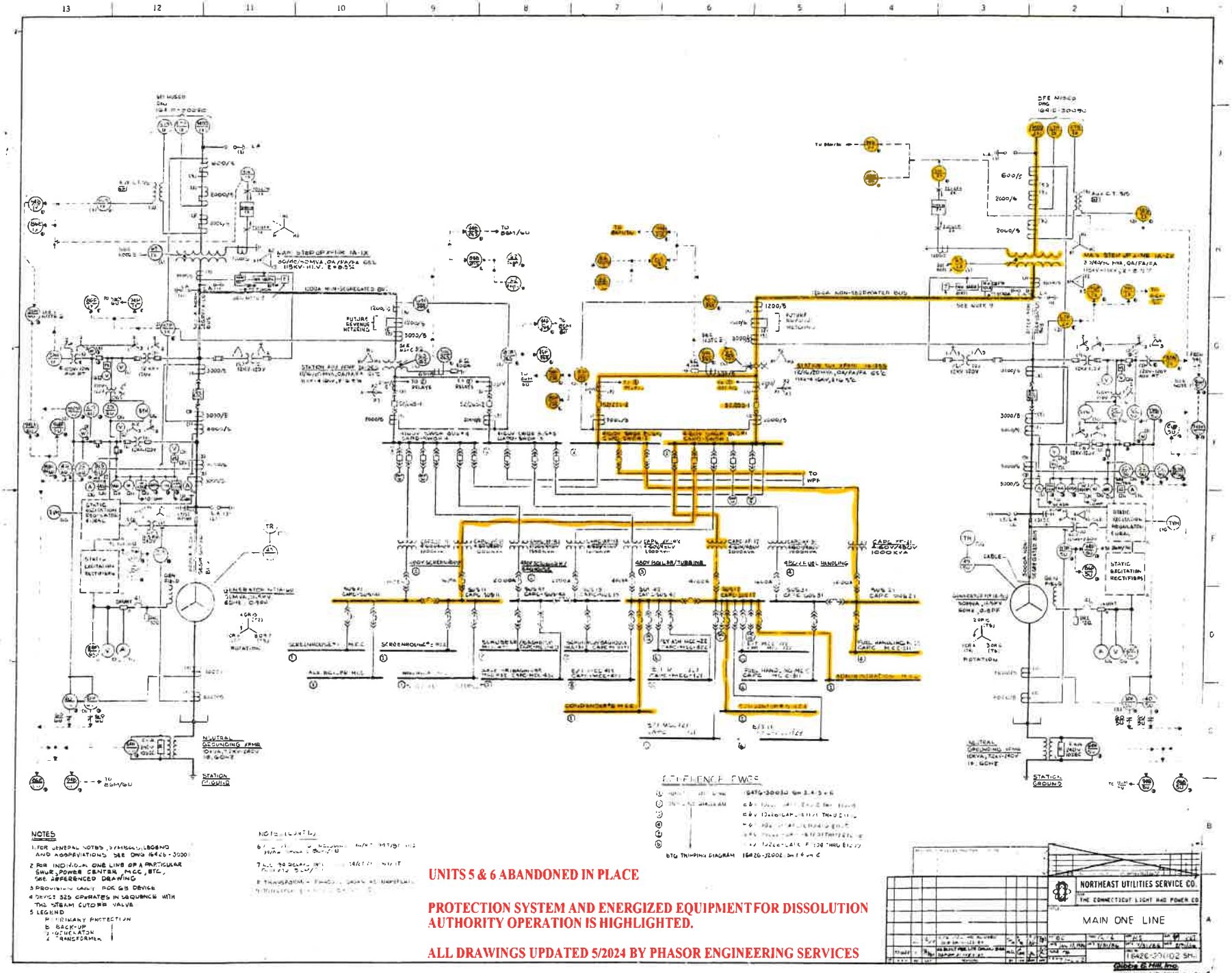
EVERSOURCE ENERGY

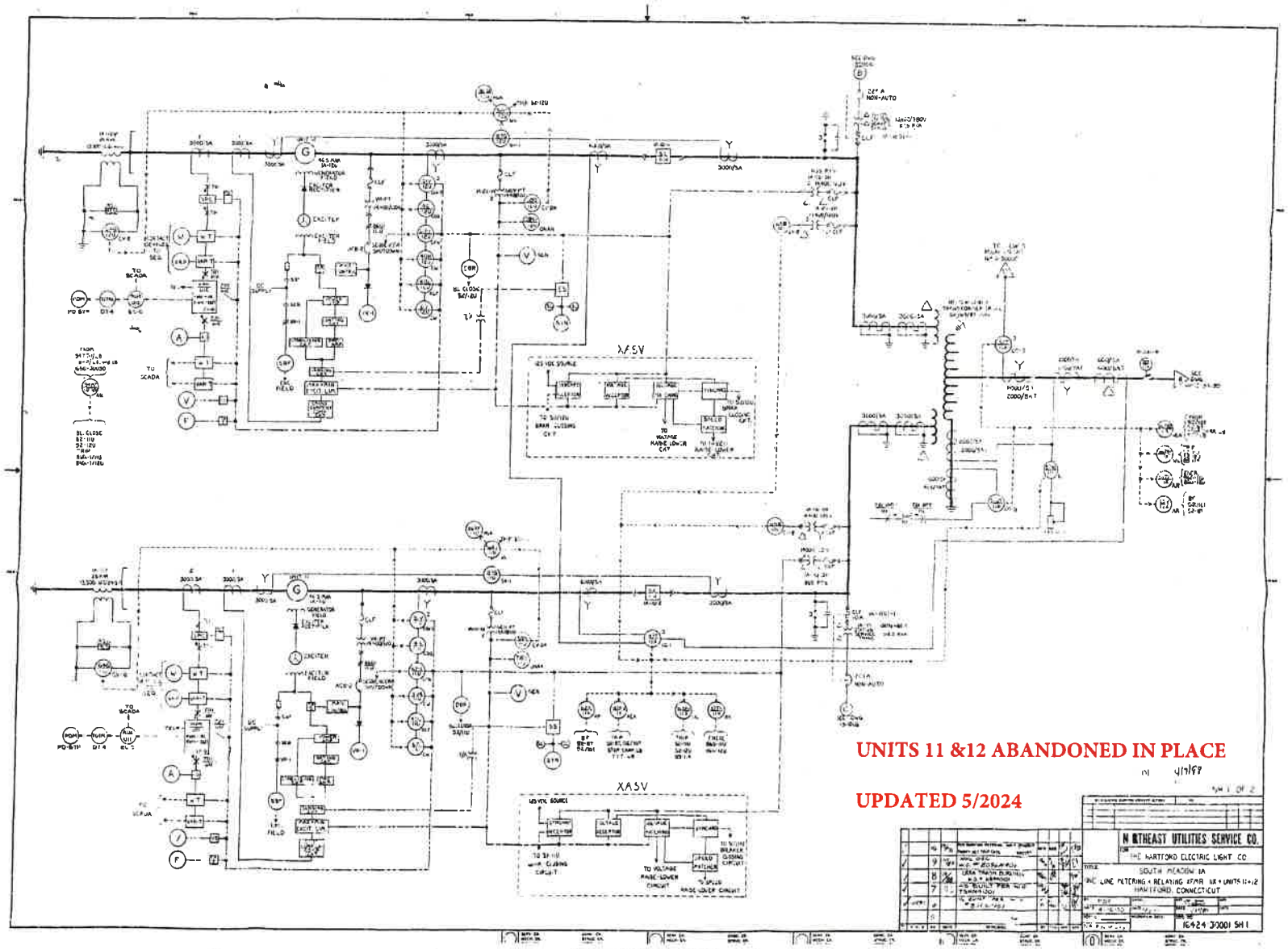
SOUTH MEADOW 1A - 115KV
NOMENCLATURE DIAGRAM
NOMENCLATURE DIAGRAM
HARTFORD, CT

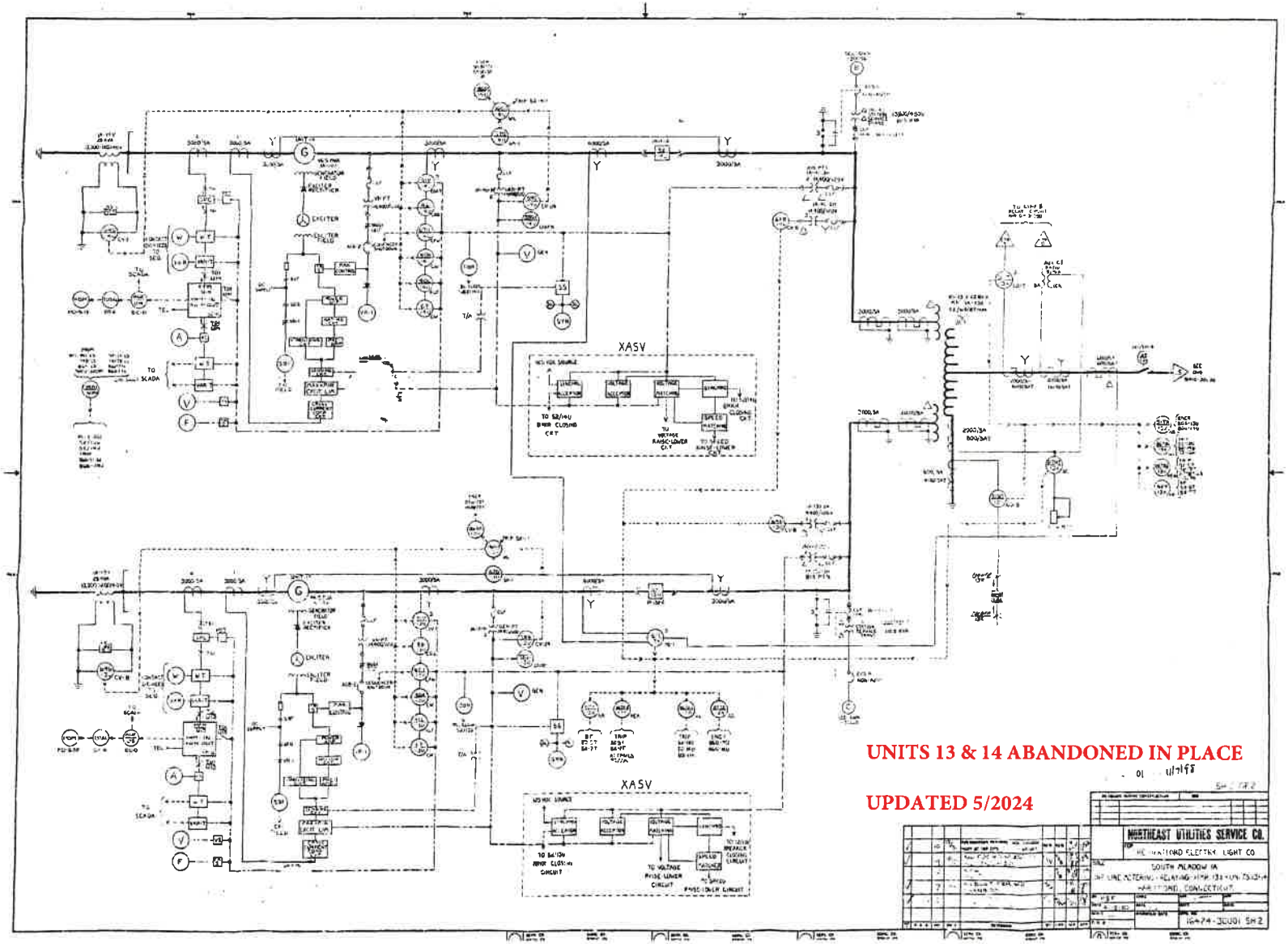
DSN	DWN	CAD	APP
	1/78	1/78	

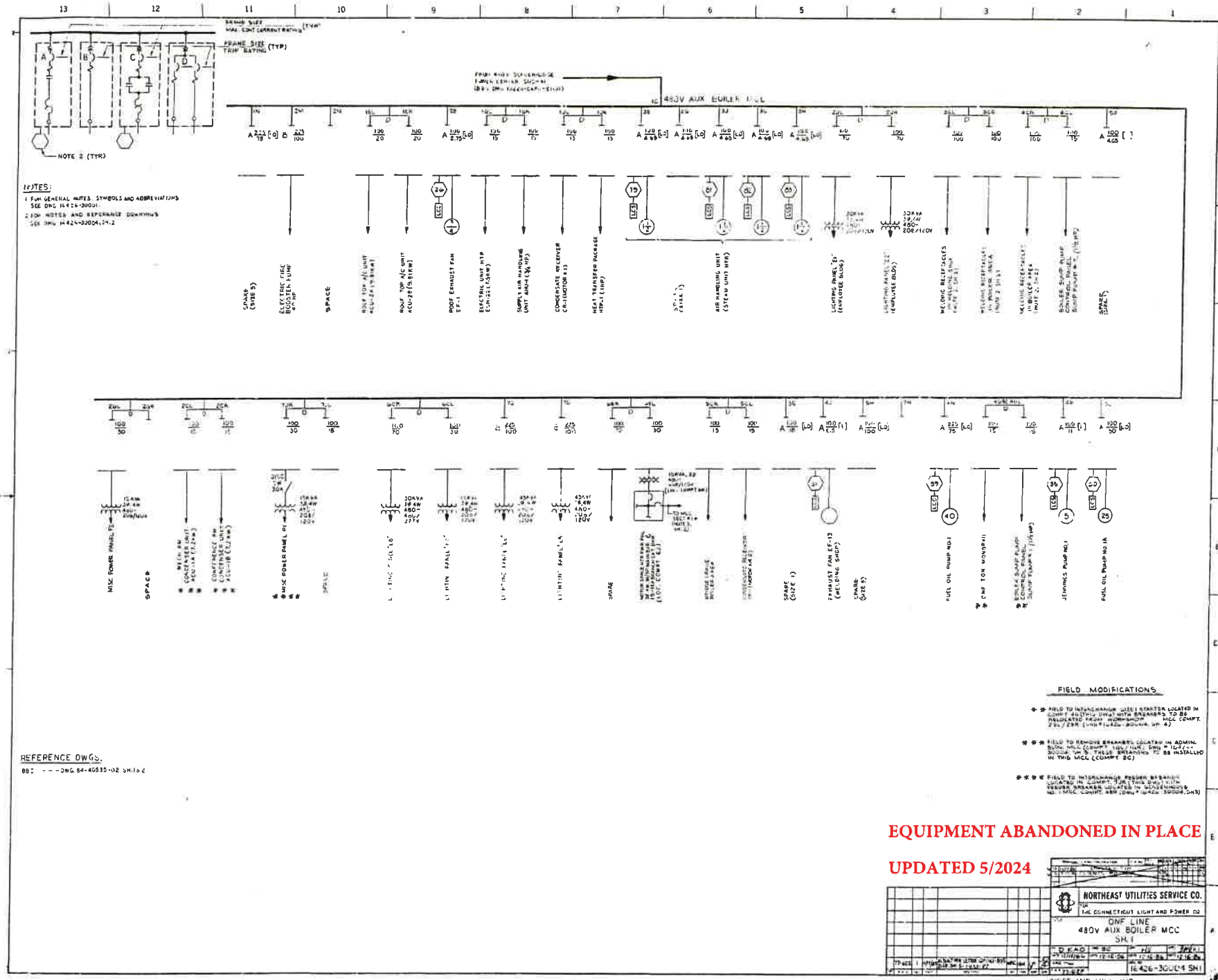
NONE

16410-91001


NOTES
1. FOR GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS SEE DWG 16426-3000
2. FOR INDIVIDUAL ONE LINE OF A PARTICULAR SWGR, POWER CENTER, MCC, ETC., SEE REFERENCED DRAWING
3. PROVISION ONLY FOR 63 DEVICE
4. DEVICE 325 OPERATES IN SEQUENCE WITH THE STEAM CUTOFF VALVE
5. LEGEND
P - PRIMARY PROTECTION
B - BACK-UP
G - GENERATOR
T - TRANSFORMER
UNITS 5 & 6 ABANDONED IN PLACE
PROTECTION SYSTEM AND ENERGIZED EQUIPMENT FOR DISSOLUTION AUTHORITY OPERATION IS HIGHLIGHTED.
ALL DRAWINGS UPDATED 5/2024 BY PHASOR ENGINEERING SERVICES
NORTHEAST UTILITIES SERVICE CO.
THE CONNECTICUT LIGHT AND POWER CO
MAIN ONE LINE
16426-3001 02 SH.
Gibbs & Hill, Inc.


UNITS 11 &12 ABANDONED IN PLACE
UPDATED 5/2024
NORTHEAST UTILITIES SERVICE CO.
THE HARTFORD ELECTRIC LIGHT CO
SOUTH MEADOW 1A
16924-30001 SH 1


XASV
XASV
UNITS 13 & 14 ABANDONED IN PLACE
UPDATED 5/2024
NORTHEAST UTILITIES SERVICE CO.



NOTES:

1. FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS SEE DWG. 16426-30001.
2. FOR NOTES AND REFERENCE DRAWINGS SEE DWG. 16426-30004, SH. 2.

REFERENCE DWGS.

BBC - - - DWG. 84-40535-02 SH. 1 & 2

FIELD MODIFICATIONS

** FIELD TO INTERCHANGE 1200A STARTER LOCATED IN COMPT. 4(ULTRA DWG.) WITH BREAKERS TO BE RELOCATED FROM WORKSHOP MCC COMPT. 2SL/2SR (DWG. # 16426-30004, SH. 4)

*** FIELD TO REMOVE BREAKERS LOCATED IN ADMIN. BLDG. MCC (COMPT. 10L/10R, DWG. # 16426-30004, SH. 3) & THESE BREAKERS TO BE INSTALLED IN THIS MCC (COMPT. 2C)

**** FIELD TO INTERCHANGE FEEDER BREAKERS LOCATED IN COMPT. 9JR (THIS DWG.) WITH FEEDER BREAKER LOCATED IN SCHENECTADY NO. 1 MCC COMPT. 4BR (DWG. # 16426-30004, SH. 3)

EQUIPMENT ABANDONED IN PLACE

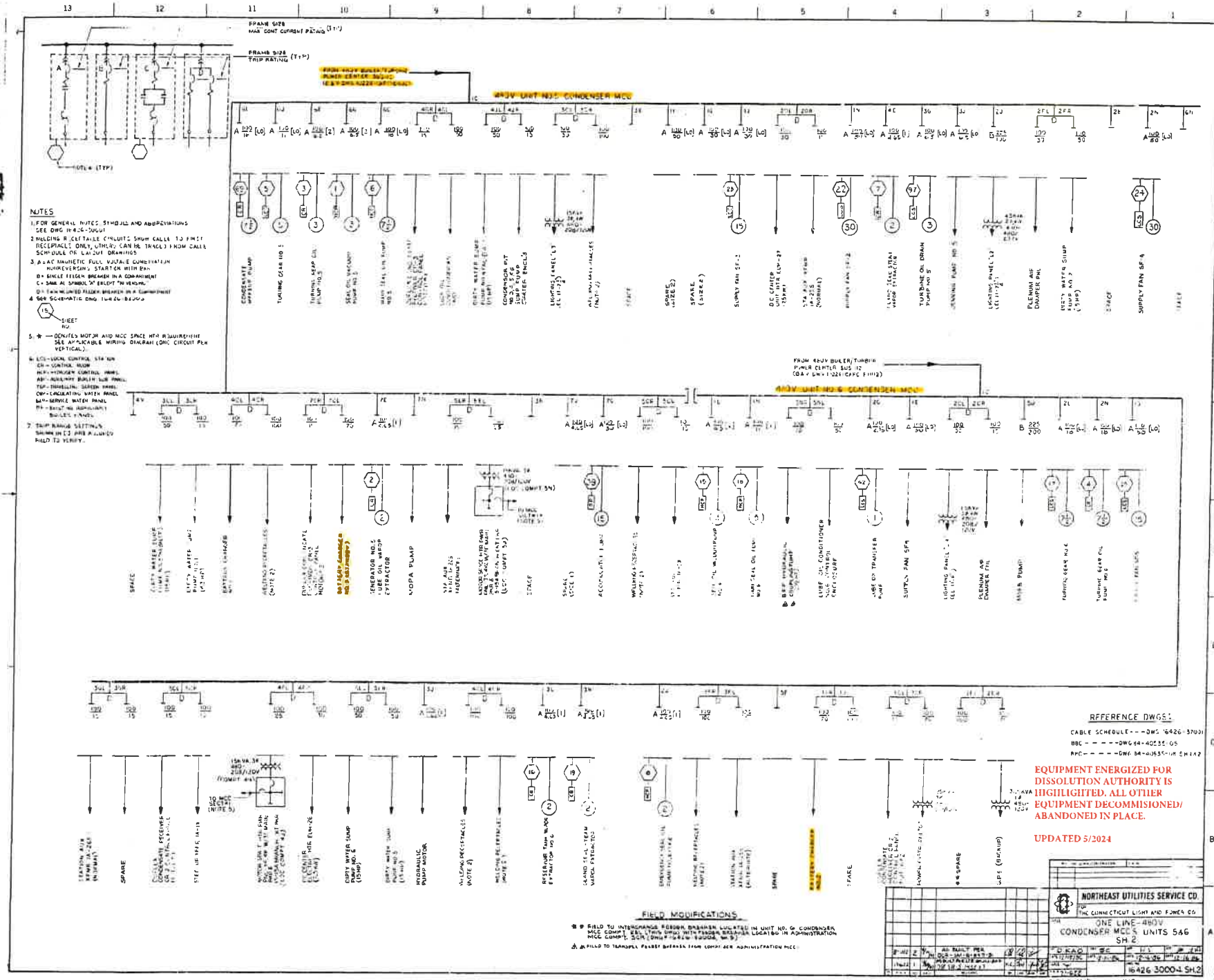
UPDATED 5/2024

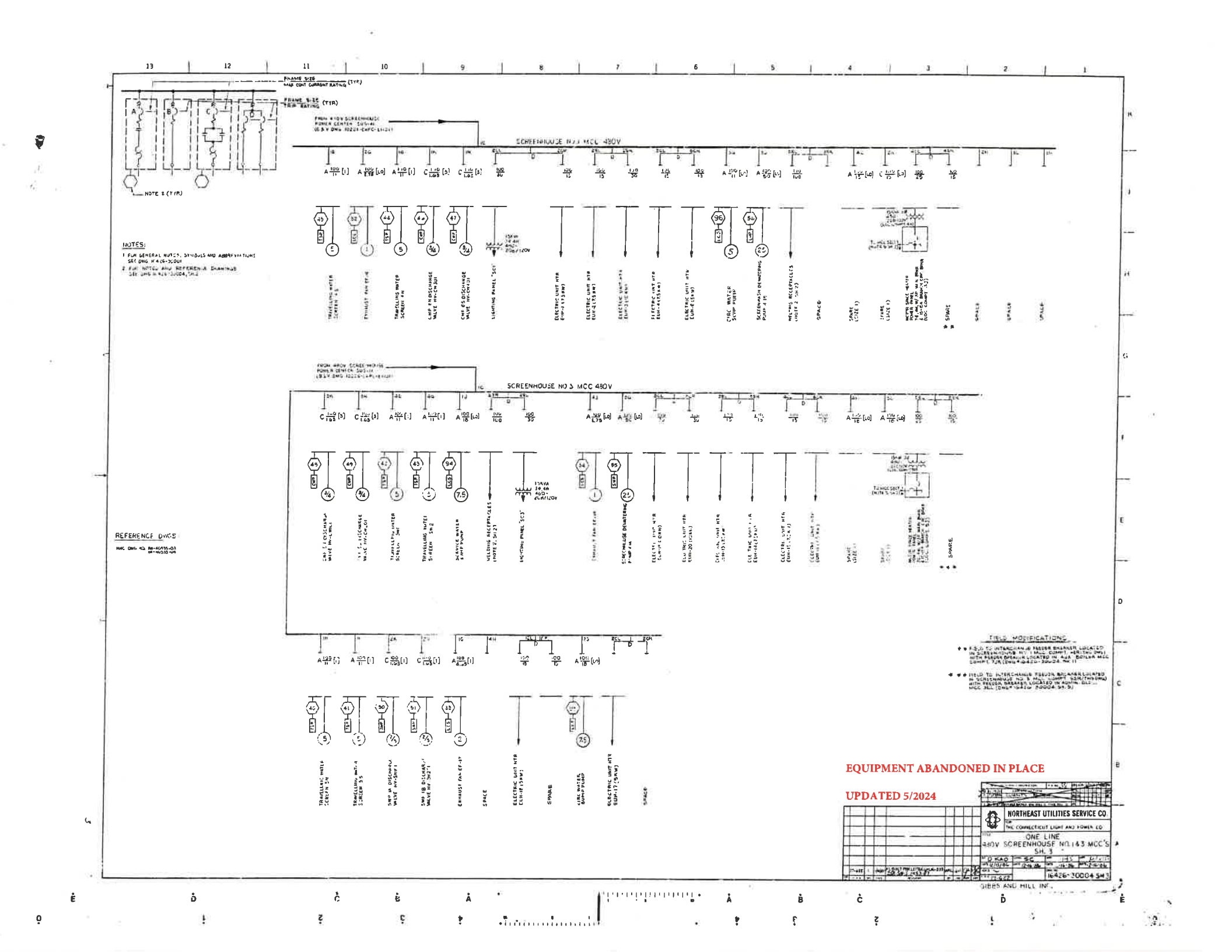
NORTHEAST UTILITIES SERVICE CO.
FOR THE CONNECTICUT LIGHT AND POWER CO.

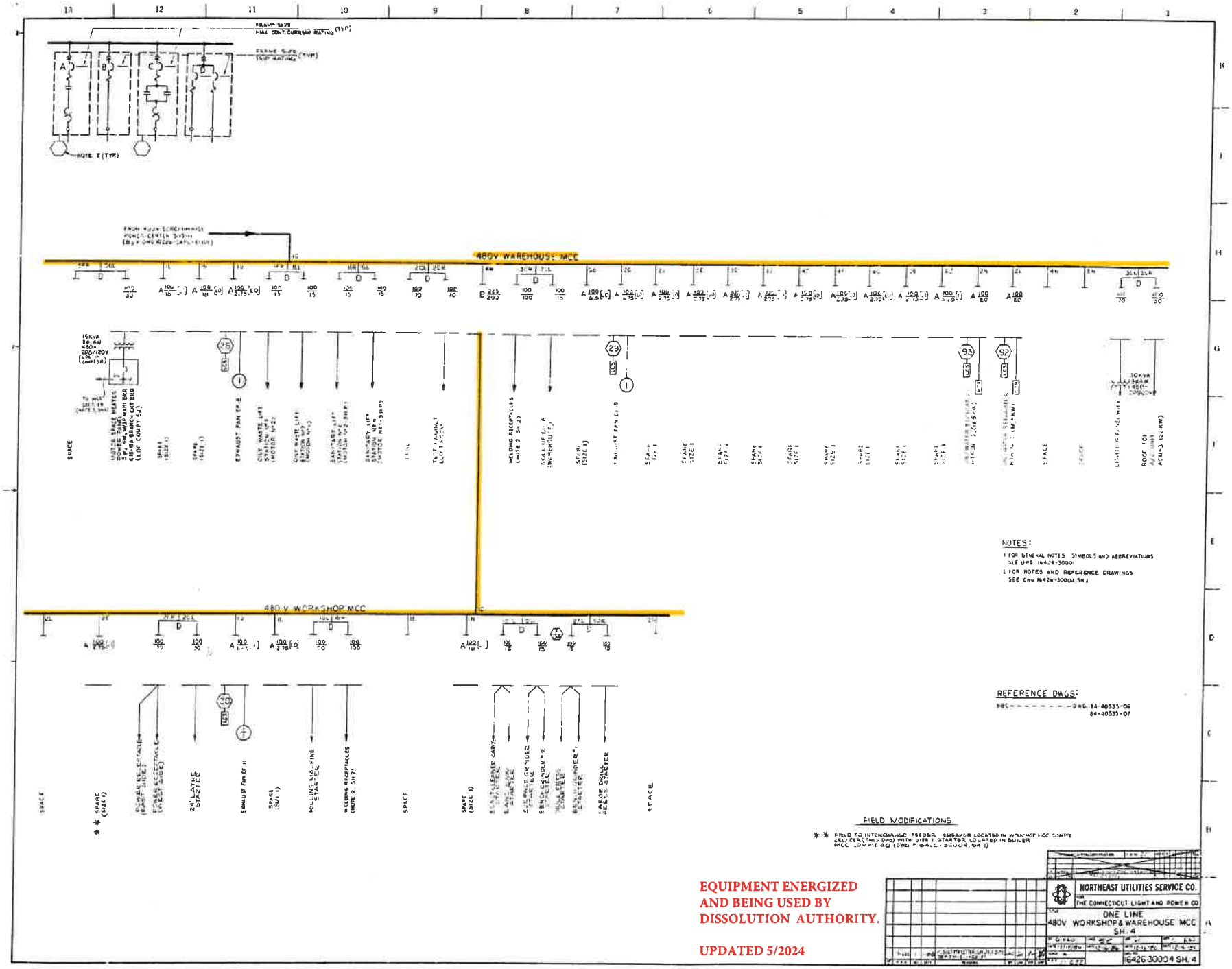
ONE LINE
480V AUX BOILER MCC
SH. 1

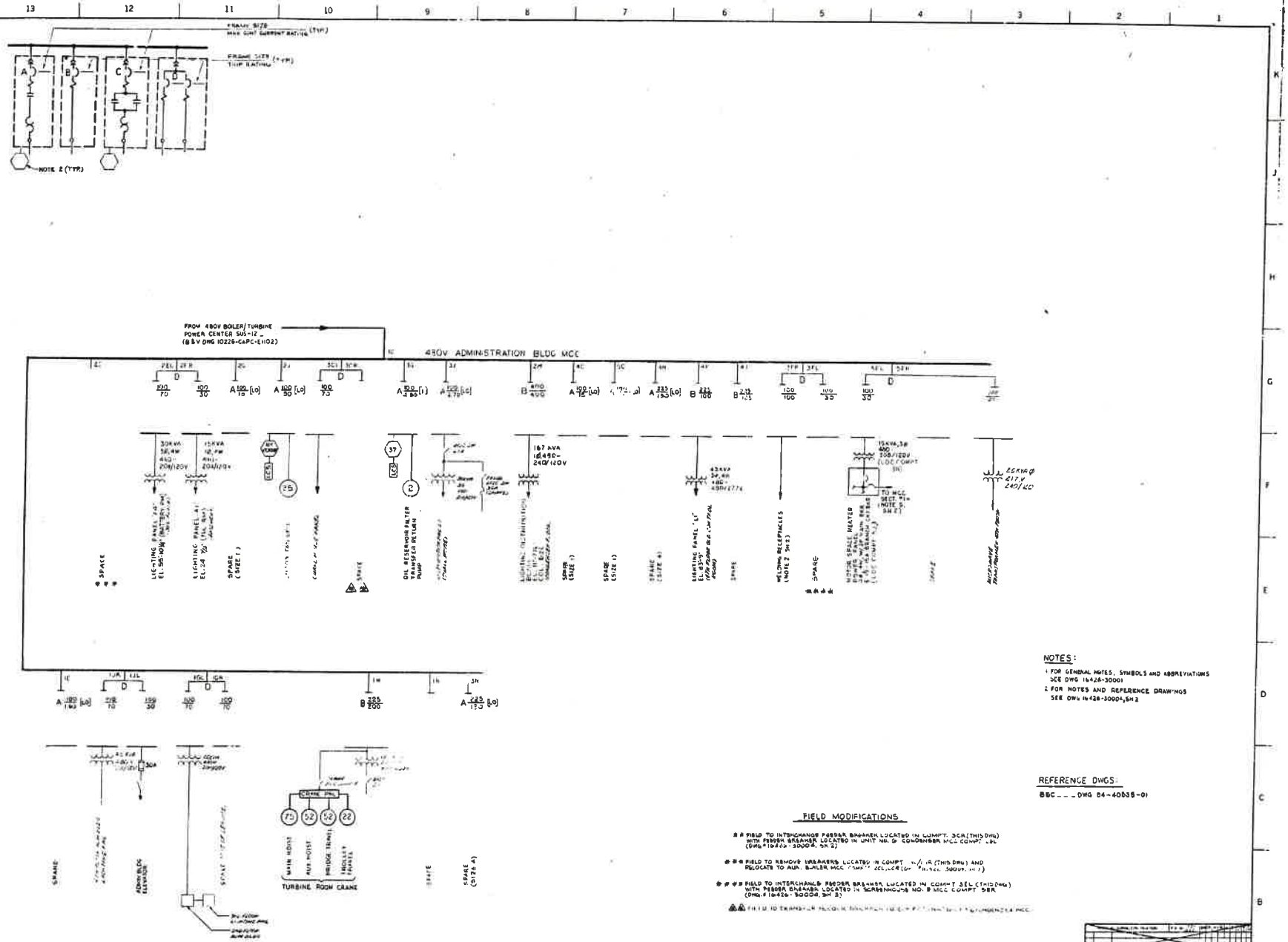
16426-30004 SH1

GIBBS AND HILL INC.


480V UNIT NO.5 CONDENSER MCC
480V UNIT NO.6 CONDENSER MCC
NOTES
1. FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS SEE DWG 16426-30001
2. WELDING RECEPTACLE CIRCUITS SHOWN CABLED TO FIRST RECEPTACLE ONLY, OTHERS CAN BE TRACED FROM CABLE SCHEDULE OR LAYOUT DRAWINGS
3. ALL AC MAGNETIC FULL VOLTAGE COMBINATION NONREVERSING STARTER WITH FOR
B= SINGLE FEEDER BREAKER IN A COMPARTMENT
C= SAME AS SYMBOL "A" EXCEPT "IN VENDOR"
D= TWO MOUNTED FEEDER BREAKERS IN A COMPARTMENT
4. SEE SCHEMATIC DWG 16426-30002
5. ★ — DENOTES MOTOR AND MCC SPACE HTR REQUIREMENT SEE APPLICABLE WIRING DIAGRAM (ONE CIRCUIT PER VERTICAL).
6. LCS-LOCAL CONTROL STATION
CR=CONTROL ROOM
HCP=HYDROGEN CONTROL PANEL
ABP=AUXILIARY BOILER LUB PANEL
TGP=TRAVELLING SCREEN PANEL
CWP=CIRCULATING WATER PANEL
SWP=SERVICE WATER PANEL
FP=FIRE PROTECTION PANELS
7. TRIP RANGE SETTINGS SHOWN IN [ ] ARE ALLOWED FIELD TO VERIFY.
FIELD MODIFICATIONS
REFERENCE DWGS:
CABLE SCHEDULE - - - DWG 16426-37001
BBC - - - - - DWG 84-40535 GS
RMC - - - - - DWG 84-40535-1R SH 1 & 2
EQUIPMENT ENERGIZED FOR DISSOLUTION AUTHORITY IS HIGHLIGHTED. ALL OTHER EQUIPMENT DECOMMISIONED/ ABANDONED IN PLACE.
UPDATED 5/2024
NORTHEAST UTILITIES SERVICE CO.
FOR THE CONNECTICUT LIGHT AND POWER CO.
ONE LINE-480V CONDENSER MCCS, UNITS 5&6 SH 2
16426 30004 SH 2
GIBBS AND HILL INC.


SCREENHOUSE NO.3 MCC 480V
SCREENHOUSE NO.3 MCC 480V
NOTES:
REFERENCE DWGS
FIELD MODIFICATIONS
EQUIPMENT ABANDONED IN PLACE
UPDATED 5/2024
NORTHEAST UTILITIES SERVICE CO.
THE CONNECTICUT LIGHT AND POWER CO.
ONE LINE
480V SCREENHOUSE NO.143 MCC'S
SH. 3
16426-30004 SH3


480V WAREHOUSE MCC
480V WCP&SHOP MCC
NOTES:
1 FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS SEE DWG 16426-30001
2 FOR NOTES AND REFERENCE DRAWINGS SEE DWG 16426-30004 SH 2
REFERENCE DWGS:
NBC - - - - - - - - - DWG. 84-40535-06
84-40535-07
FIELD MODIFICATIONS
** FIELD TO INTERCHANGE FEEDER BREAKER LOCATED IN WORKSHOP MCC COMPT 4&5/ZBR (THIS DWG) WITH AIR COMPRESSOR STARTER LOCATED IN BOILER MCC COMPT 6G (DWG 16426-30004, SH 1)
EQUIPMENT ENERGIZED AND BEING USED BY DISSOLUTION AUTHORITY.
UPDATED 5/2024
NORTHEAST UTILITIES SERVICE CO.
THE CONNECTICUT LIGHT AND POWER CO
ONE LINE
480V WORKSHOP & WAREHOUSE MCC
SH. 4
16426-30004 SH. 4
GIBBS AND HILL INC



NOTES:

1. FOR GENERAL NOTES, SYMBOLS AND ABBREVIATIONS SEE DWG 16428-30001
2. FOR NOTES AND REFERENCE DRAWINGS SEE DWG 16428-30004, SH 2

REFERENCE DWGS:

BBC - - - DWG 84-40838-01

FIELD MODIFICATIONS

* FIELD TO INTERCHANGE FEEDER BREAKER LOCATED IN COMPT. 3CA (THIS DWG) WITH FEEDER BREAKER LOCATED IN UNIT NO. 6 CONDENSER MCC COMPT. 1B4 (DWG #10426-30008, SH 2)

** FIELD TO REMOVE BREAKERS LOCATED IN COMPT. 1C (IR (THIS DWG) AND RELOCATE TO AUX. BOILER MCC COMPT. 2CL, 2CR (DWG #10426-30008, SH 1)

*** FIELD TO INTERCHANGE FEEDER BREAKER LOCATED IN COMPT 3EL (THIS DWG) WITH FEEDER BREAKER LOCATED IN SCREENHOUSE NO. 8 MCC COMPT 5ER (DWG # 10426-30008, SH 3)

**** FIELD TO TRANSFER FEEDER BREAKER LOCATED IN COMPT. 1E (THIS DWG) TO SPARE COMPARTMENT IN MCC

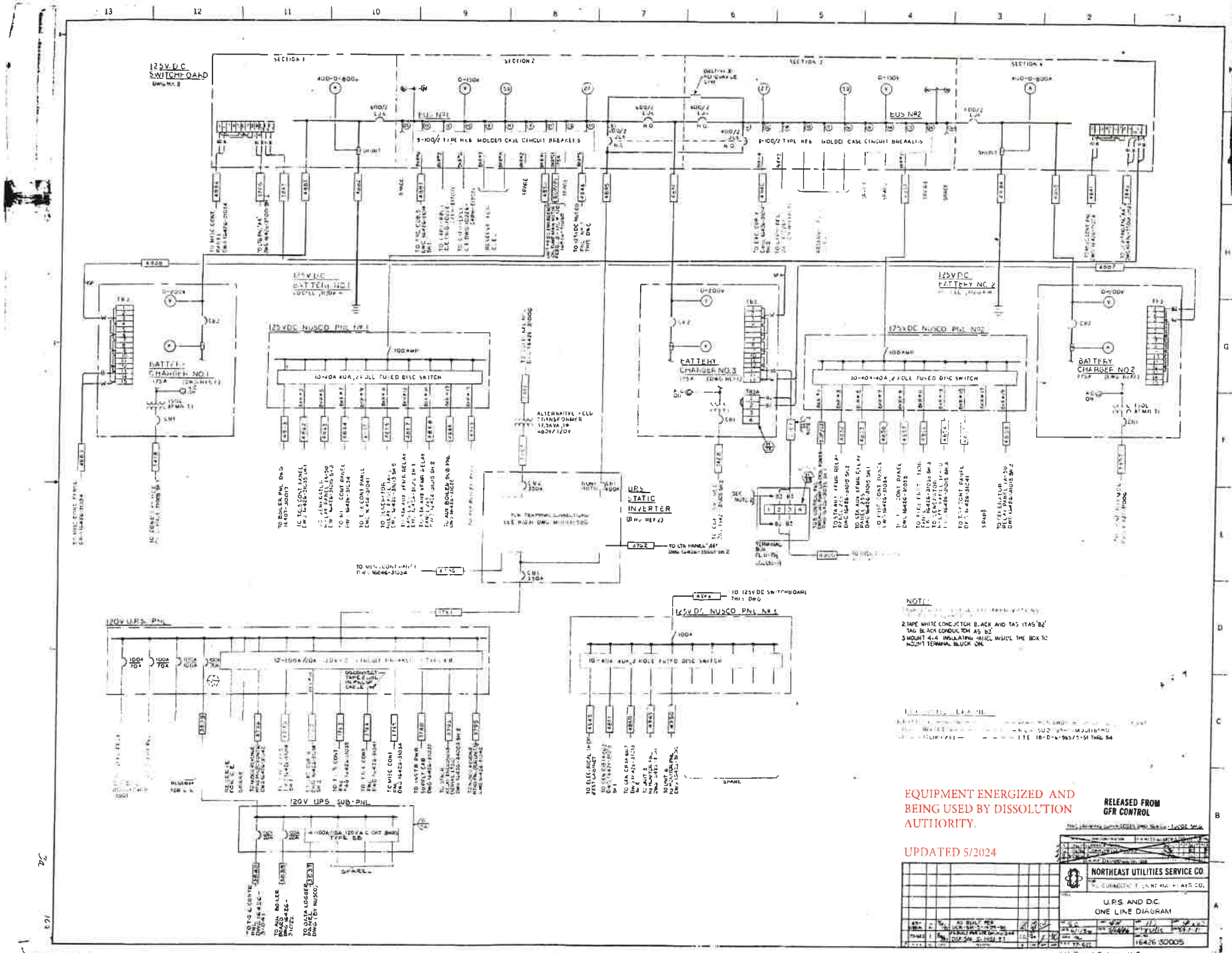
EQUIPMENT ENERGIZED AND BEING USED BY DISSOLUTION AUTORITY.

UPDATED 5/2024

NORTHEAST UTILITIES SERVICE CO.
FOR THE CONNECTICUT LIGHT AND POWER CO
TITLE
ONE LINE
480V ADMINISTRATION BLDG MCC
SH. 5

16428-30004 SH. 5

GIBBS AND HILL INC.


125V D.C. SWITCHBOARD
SECTION 1
SECTION 2
SECTION 3
SECTION 4
400-0-800A
0-1500A
400/2 C.B.A.
400/2 C.B.N.
BUS N#1
BUS N#2
9-100/2 TYPE HKB MOLDED CASE CIRCUIT BREAKERS
8-100/2 TYPE HKB MOLDED CASE CIRCUIT BREAKERS
SPARE
125V D.C. BATTERY NO.1
125V D.C. BATTERY NO.2
BATTERY CHARGER NO.1
BATTERY CHARGER NO.3
BATTERY CHARGER NO.2
0-200V
125VDC NUSCO PNL N#1
125VDC NUSCO PNL N#2
100AMP
10-40A 40A,2 POLE FUSED DISC SWITCH
ALTERNATIVE FEED TRANSFORMER 15KVA,1Ø 480V/120V
UPS STATIC INVERTER
120V UPS PNL
120V UPS SUB-PNL
125V D.C. NUSCO PNL N#3
10-40A 40A,2 POLE FUSED DISC SWITCH
TO 125V DC SWITCHBOARD THRU DWG
SPARE
NOTE:
2 TAPE WHITE CONDUCTOR BLACK AND TAS ITAS'B2'
TAG BLACK CONDUCTOR AS B2
3 MOUNT 4-6 INSULATING PANEL INSIDE THE BOX TO MOUNT TERMINAL BLOCK ON.
EQUIPMENT ENERGIZED AND BEING USED BY DISSOLUTION AUTHORITY.
UPDATED 5/2024
RELEASED FROM GFR CONTROL
NORTHEAST UTILITIES SERVICE CO
U.P.S. AND D.C. ONE LINE DIAGRAM
16426 30005
GIBBS AND HILL INC.

Attachment 8

Other Utilities Information

Shuttered Resource Recovery Facility
100 Reserve Road and 300 Maxim Road
Hartford, CT 06114

1. Water Service

Water service is supplied by the MDC to the following locations:

- Authority offices at 300 Maxim Road (for use by staff and for the fire sprinkler systems);
- PBF/JTF (for use by staff and for priming the pumps that convey water from the coal pond to the neutralization basin); and
- Fire hydrant systems that surround both the WPF and the PBF.

There are four (4) active accounts with MDC in the name of the MIRA Dissolution Authority for water service to the South Meadow Station property, as follows:

Account Number	Service Location (as described on invoices from MDC)
21092357	300 Maxim Road, Hartford, CT 06106
21092262	Reserve Road, Hartford, CT 06106
21025181	Wawarme & Van Dyke Aves, Hartford, CT 06106
21050629	Opp 101 Reserve Rd, Hartford, CT 06106

All water lines into the site are equipped with backflow preventers (BFPs), as required by the State Public Health Code. The BFPs must be tested on an annual basis to confirm proper operation, and repaired/replaced if they are found to be malfunctioning. Copies of the most-recent BFP inspection report (completed by Aqua-Backflow/Gallicchio Plumbing) and the most-recent BFP inspection notice from MDC are attached. Also attached are photos depicting the locations of the water meters and the BFPs installed on the main lines to the site.

2. Natural Gas Service

Connecticut Natural Gas Corporation (CNG) provides natural gas service to the WPF portion of the site to fuel the boiler and hot water heater that serve the Authority's offices. The natural gas also fuels make-up air heaters for the WPF warehouse, which must be heated during cold-weather months to prevent the wet sprinkler system from freezing.

The Authority's account number with CNG is 040-0011118-6934

Two additional natural gas service lines formerly served the site. The natural gas service to the PBF was disconnected by CNG at the gas main in Reserve Road in November 2023; and the natural gas service to the regenerative thermal oxidizers located at the WPF was disconnected by CNG at the gas main in Maxim Road in November 2022.

Drawings depicting the locations of the one active natural gas line and the two disconnected natural gas lines are attached.

Attachment A

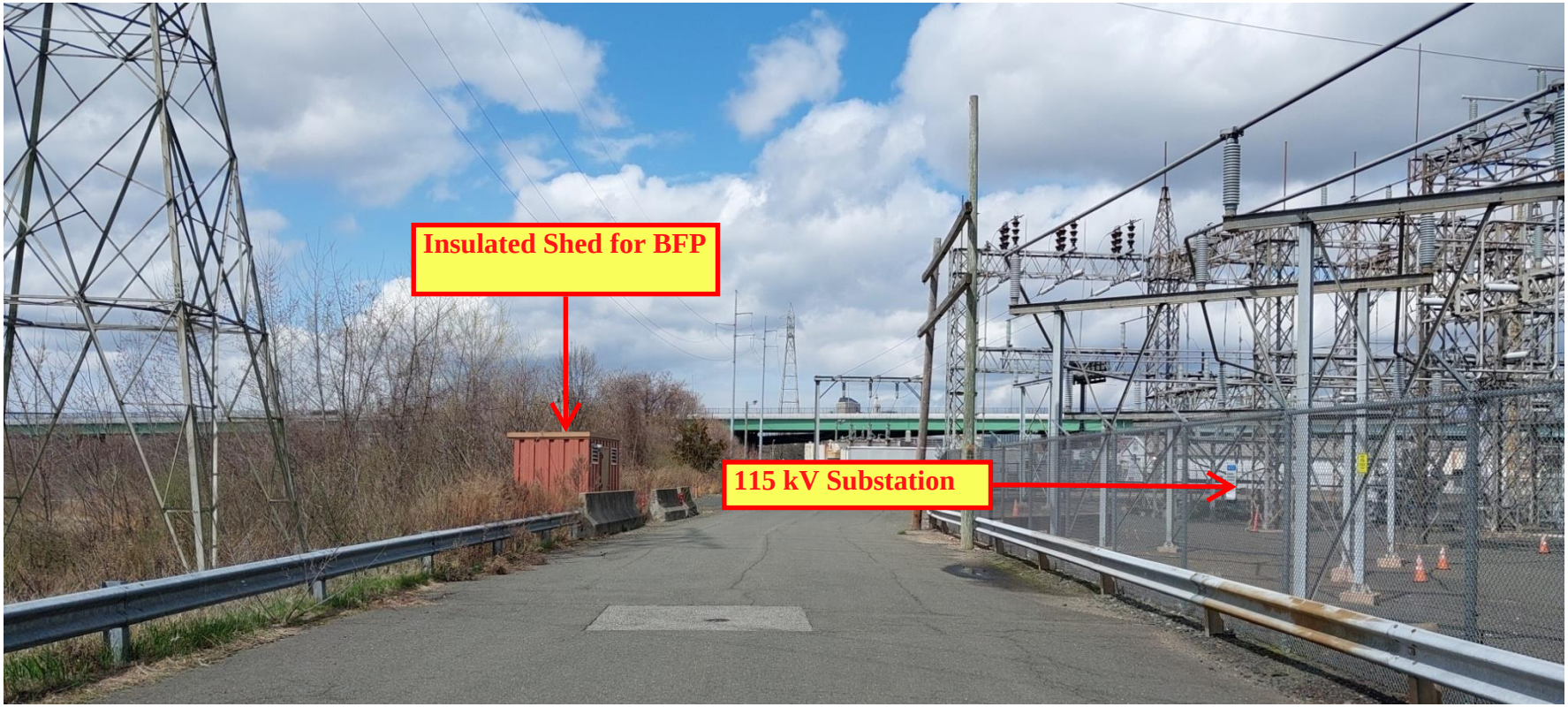
Backflow Preventer and Water Service Information



"Wawarme & Van Dyke," MDC Account Number 21025181: MDC water service location (under the Charter Oak Bridge next to Gate 20 access road) for the PBF. Photo shows insulated "hot box" for the backflow preventer, and the meter pit for service location called "Wawarme & Van Dyke," MDC Account Number 21025181.



<u>"Reserve Rd," MDC Account Number 21092262:</u> MDC water service location (adjacent to access road to Charter Oak Landing park, north of the Charter Oak Bridge) for the PBF. Photo shows insulated "hot box" for the backflow preventer, and approximate meter pit location for service location called "Reserve Rd," MDC Account Number 21092262.



<u>"Reserve Rd," MDC Account Number 21092262:</u> MDC water service location (on-site to the west of the 115 kV Eversource substation) for the PBF fire loop. Photo shows insulated shed for the backflow preventer for the fire loop. The fire loop water service charges are included on the location called "Reserve Rd," MDC Account Number 21092262.

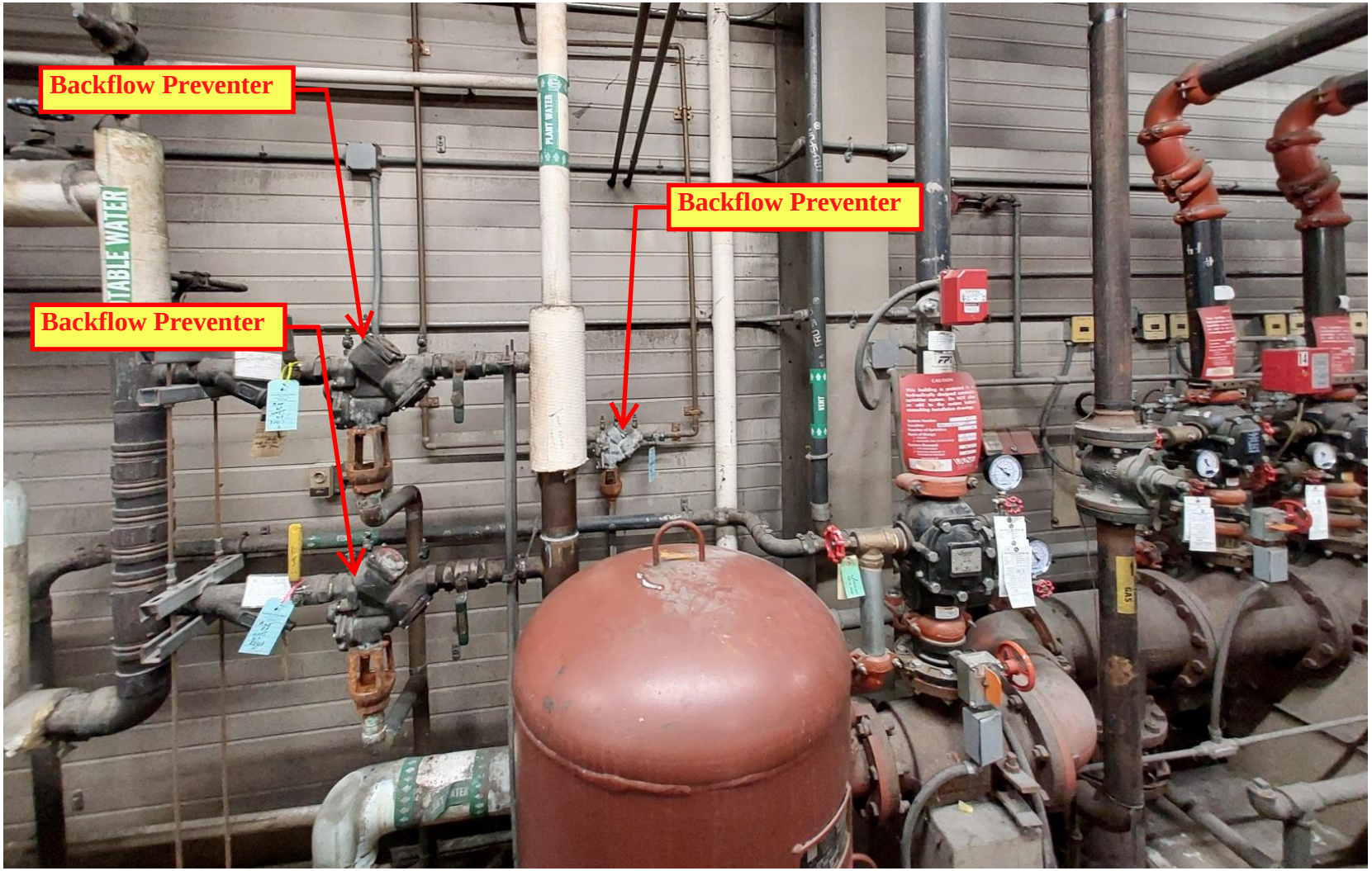




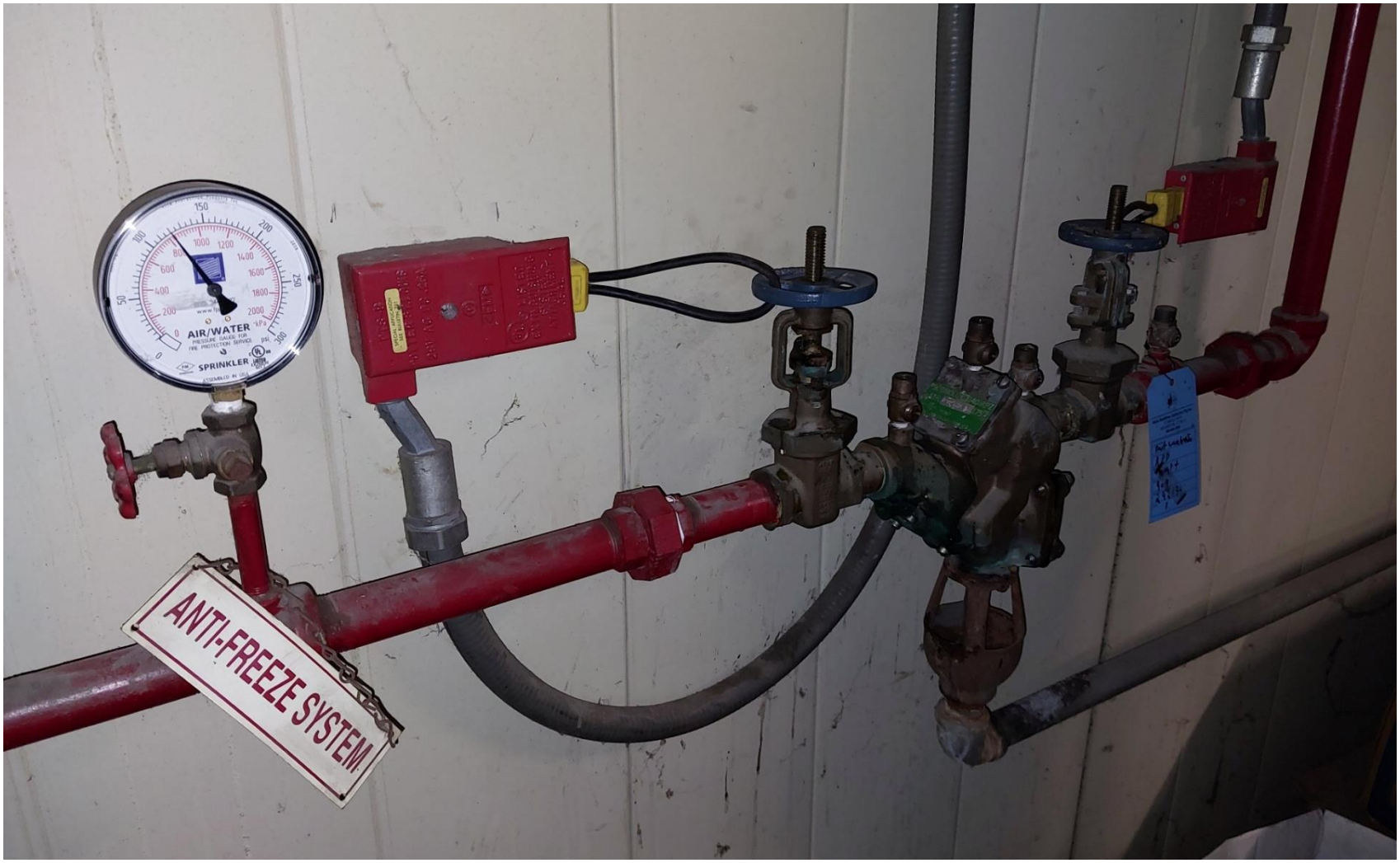
<u>"Reserve Rd," MDC Account Number 21092262:</u> MDC water service location for the "coal pond pump house" has a backflow preventer installed. This water service is used to prime the pumps in the pump house in order to initiate discharge of the coal pond to the sanitary sewer. There is an electric heater in the pump house to prevent the water line and backflow preventer from freezing. The water service charges are included on the location called "Reserve Rd," MDC Account Number 21092262.



<u>"300 Maxim Rd," MDC Account Number 21092357:</u> MDC water service location (adjacent to 300 Maxim Road, south of the WPF) for the WPF fire loop. Photo shows insulated "hot box" for the backflow preventer for the 10" fire loop. The fire loop water service charges are included on the location "300 Maxim Rd," MDC Account Number 21092357.



<u>"300 Maxim Rd," MDC Account Number 21092357:</u> Three (3) backflow preventers located inside the mechanical room of the WPF. These three backflow preventers are required under MDC water service ordinances, and included as part of the "300 Maxim Rd," MDC Account Number 21092357.



"300 Maxim Rd," MDC Account Number 21092357: Backflow preventer (BFP) located inside the WPF Parts Warehouse required under MDC water service ordinances, and included as part of the "300 Maxim Rd," MDC Account Number 21092357. Note that this BFP is installed on a fire sprinkler system with anti-freeze in the lines to prevent the lines from freezing in the winter.

AQUA BACKFLOW/GALLICCHIO PLUMBING INC.
77 BRIDLE PATH NEWINGTON, CT. 06111
Phone- 860-666-2900 Fax-860-665-1390

Date: 4/10/2025 **Page 1**
Name of Premises: MIRA Dissolution Authority 300 Maxim Rd. Hartford, Ct. 06114
Service Address: Reserve Rd. Gate 20 Hartford, Ct.
Contact: Christopher Shepard 860-716-2431 **Water District:** M.D.C.

LOCATION	SIZE	MODEL	SERIAL #	MFG	VALVE #1	VALVE #2	REL	PSI
Red Hut- Fire Service	8"	909	620984	WATTS	6.8	1.8	2.6	110
Coal pond rm-seal water for scrubber make-up transfer pump	2"	825Y	J011440	FEBCO	8.0	1.2	2.4	100
Hot box under bridge- Main Line	8"	880v	0001111122	FEBCO	7.4	1.2	2.2	110
Hot box under bridge- Main Line	6"	880v	0001081117	FEBCO	**FAIL**			

→**REMARKS**: 0001081117 FAILED Quote sent
ALL OTHERS PASS

Tested By: John Gallicchio **OF** AQUA BACKFLOW GALLICCHIO PLUMBING INC.
Date: 4/10/2025 **State Cert.** DWBT 204343 **Test Gauge/Calibration Exp:** 53709/10-7-2024

AQUA BACKFLOW/GALLICCHIO PLUMBING INC.
77 BRIDLE PATH NEWINGTON, CT. 06111

Phone- 860-666-2900 **Fax-860-665-1390**

Date: 4/10/2025 **Page 1**
Name of Premises: MIRA Dissolution Authority
Service Address: 300 Maxim Road Hartford, Ct.
Contact: Chris Shepard 860-716-2431 **Water District:** MDC

LOCATION	SIZE	MODEL	SERIAL #	MFG	VALVE #1	VALVE #2	REL	PSI
Mech Room- Boiler make-up s/wall	¾"	909	485335	WATTS	7.8	1.8	3.0	60
Mech Room- Plant water s/wall	2"	909	82957	WATTS	8.8	1.2	2.2	120
Mech Room- Plant process water s/wall	2"	909	82988	WATTS	8.6	1.8	3.0	120
Fire- in hot box south side of bldg. @ street	10"	709	401037	WATTS	1.8	2.2	DCVA	120
Parts Warehouse-Wet sprinkler	1"	909	292136	WATTS	5.8	3.2	2.2	120

I hereby certify the following data to be correct.
Remarks: ALL PASS **Tested By:** John Gallicchio
OF AQUA BACKFLOW GALLICCHIO PLUMBING INC.
Date: 4/10/2025 **State Cert.** DWBT204343 **Test Gauge/Calibration:** 53709/10/7/2024

The Metropolitan District
water supply • environmental services • geographic information

Tuesday, January 7, 2025 **Response Due Date: 2/7/2025**

Mira Waste Proc Fac
300 Maxim Road
Hartford, CT 06114

RE: Mira Waste Proc. Facility
300 Maxim Rd, Hartford, CT 06114

Annual Testing Notification Letter

Dear Mira Waste Proc Fac:

Annual testing of backflow prevention devices is required by both the State of Connecticut Public Health Code § 19-13-B37 and § W12h of The Metropolitan District ("MDC") Water Ordinances. In accordance with these regulations, any property which contains a testable backflow preventer must provide a test report.

The owner of any property where a testable backflow device exists shall, upon installation and annually thereafter, have the device tested by a State of Connecticut certified backflow prevention device tester.

Our records indicate that your backflow device is due for its annual test. Submit completed test results to the mailing address, email, or fax listed. Please see the attached form(s) for your device(s).

The Metropolitan District
ATTN: Cross-Connection Department
125 Maxim Road
Hartford, CT 06114
Crossconnections@themdc.com

At the bottom of this letter is a list of all devices which must be tested. ***Test reports must be received by the MDC by the due date listed below.*** If the due date is already past, test reports must be received within thirty (30) days of the date of this letter. Failure to test the backflow device or submit the test reports to the MDC will result in a letter of non-compliance being forwarded to the local health department and CT Department of Public Health and may subject the property to termination of water service.

The CT Department of Public Health maintains a list of Certified Backflow Prevention Device Testers that requested to be listed as available to perform the required test. You may see the list of certified testers www.elicense.ct.gov (click on "Generate Roster" then click on "Drinking Water System Operators" check the box "Contractor List - Drinking Water Systems scroll down and click "Continue.")

Please note that any removal or relocation of a testable device must have prior approval from the MDC Cross Connection Department. In the event that a testable device has been removed or relocated, an inspection of the facility by a member of the MDC is required to determine if the facility is in compliance with MDC ordinances and state law.

If devices at your facility have been tested and reports have been sent to the Metropolitan District, thank you. If you have any further questions, please contact, please contact the Cross-Connection Inspector at **Kenny Deal** at **860-278-7850 Ext:3630**.

Thank you for your prompt attention to this matter. Your cooperation is essential in maintaining the safety and quality of our water supply.

Sincerely,
The Metropolitan District
Cross-Connection Department

MDC **The Metropolitan District**

Member Towns include: Bloomfield, East Hartford, Hartford, Newington, Rocky Hill, West Hartford, Wethersfield and Windsor. We also supply treated water to portions of Glastonbury, South Windsor, Farmington, East Granby.

Backflow Prevention Device Assembly Annual Test Report Form

Results of test to be submitted to: CrossConnections@themdc.com

Testing Company Name_____
Testing Company Address_____
Testing Company phone # _____

Date_____ Time _____
Tested by_____
DWBT _____
MDC tag # (if available)_____

RPD☐ DCVA☑ PVB☐ SRVB☐

Owner of Property *Mira Waste Proc. Facility*
Mailing Address *300 Maxim Road, Hartford, CT 06114*
Owner's Email _____
Contact Person *Abdul Rabah*
Device Address *300 Maxim Rd, Hartford, CT 06114*
Device Identification Number *401037*
Test Kit Serial # _____ Calibration Date _____

Make *WATTS* Model No. *709*
Size *10.00* Serial No. *401037*
Test After Installation ☐
Test After Repairs ☐
Annual Test ☐
Other _____ ☐

Reduced Pressure Backflow Prevention Device Assembly (RPD)

Check Valve No. 1	Check Valve No. 2 Tightness	Flow Condition Evaluated	Relief Valve DP Opening Point	Check Valve No. 2 DP
Closed Tight ☐ Leaked ☐ _____.__ PSID	Closed Tight ☐ Leaked ☐	Flow ☐ No-Flow ☐	Opened at PSID _____.__ Did Not Open ☐	_____.__ PSID

Pressure Vacuum Breaker (PVB) Spill Resistant Vacuum Breaker (SRVB)

Check Valve DP	Flow Condition Evaluated
_____.__ PSID	Flow ☐ No-Flow ☐

Double Check Valve Device Assembly (DCVA)

Backpressure Test		Check Valve No. 1 DP	Check Valve No. 2 DP	Flow Condition Evaluated
TC#1 PSI	TC#4 PSI	_____.____ PSID	_____.____ PSID	Flow ☐ No-Flow ☐

Air Inlet Valve DP Opening Point

Opened at _____.____
PSID
Did Not Open ☐

At the time of the test, the downstream shut-off valve was: Closed Tight ☐ Leaked ☐ Not Tested ☐

Line Pressure _____PSI | Protection Type: Service Line ☐ Fire Service Line ☐ Internal Domestic Plumbing System ☐

Signature of Certified Tester

PASS ☐ FAIL ☐ OTHER ☐

Test Witnessed by:

Water Works Official

Owner Agent

State Official

Remarks

Service Restored ☐

MDC **The Metropolitan District**

Member Towns include: Bloomfield, East Hartford, Hartford, Newington, Rocky Hill, West Hartford, Wethersfield and Windsor. We also supply treated water to portions of Glastonbury, South Windsor, Farmington, East Granby.

Backflow Prevention Device Assembly Annual Test Report Form

Results of test to be submitted to: CrossConnections@themdc.com

Testing Company Name_____
Testing Company Address_____
Testing Company phone # _____

Date_____ Time _____
Tested by_____
DWBT _____
MDC tag # (if available)_____

RPD☑ DCVA☐ PVB☐ SRVB☐

Owner of Property *Mira Waste Proc. Facility*
Mailing Address *300 Maxim Road, Hartford, CT 06114*
Owner's Email _____
Contact Person *Abdul Rabah*
Device Address *300 Maxim Rd, Hartford, CT 06114*
Device Identification Number *485335*
Test Kit Serial # _____ Calibration Date _____

Make *WATTS* Model No. *909*
Size *0.75* Serial No. *485335*
Test After Installation ☐
Test After Repairs ☐
Annual Test ☐
Other _____ ☐

Reduced Pressure Backflow Prevention Device Assembly (RPD)

Check Valve No. 1	Check Valve No. 2 Tightness	Flow Condition Evaluated	Relief Valve DP Opening Point	Check Valve No. 2 DP
Closed Tight ☐ Leaked ☐ _____.__ PSID	Closed Tight ☐ Leaked ☐	Flow ☐ No-Flow ☐	Opened at PSID _____.__ Did Not Open ☐	_____.__ PSID

Pressure Vacuum Breaker (PVB) Spill Resistant Vacuum Breaker (SRVB)

Check Valve DP	Flow Condition Evaluated
_____.__ PSID	Flow ☐ No-Flow ☐

Double Check Valve Device Assembly (DCVA)

Backpressure Test		Check Valve No. 1 DP	Check Valve No. 2 DP	Flow Condition Evaluated
TC#1 PSI	TC#4 PSI	_____.____ PSID	_____.____ PSID	Flow ☐ No-Flow ☐

Air Inlet Valve DP Opening Point

Opened at _____.____ PSID
Did Not Open ☐

At the time of the test, the downstream shut-off valve was: Closed Tight ☐ Leaked ☐ Not Tested ☐

Line Pressure _____PSI | Protection Type: Service Line ☐ Fire Service Line ☐ Internal Domestic Plumbing System ☐

Signature of Certified Tester

PASS ☐ FAIL ☐ OTHER ☐

Test Witnessed by:

Water Works Official

Owner Agent

State Official

Remarks

Service Restored ☐

MDC **The Metropolitan District**

Member Towns include: Bloomfield, East Hartford, Hartford, Newington, Rocky Hill, West Hartford, Wethersfield and Windsor. We also supply treated water to portions of Glastonbury, South Windsor, Farmington, East Granby.

Results of test to be submitted to: CrossConnections@themdc.com

Backflow Prevention Device Assembly Annual Test Report Form

Testing Company Name_____
Testing Company Address_____
Testing Company phone # _____

Date_____ Time _____
Tested by_____
DWBT _____
MDC tag # (if available)_____

Owner of Property *Mira Waste Proc. Facility*
Mailing Address *300 Maxim Road, Hartford, CT 06114*
Owner's Email _____
Contact Person *Abdul Rabah*
Device Address *300 Maxim Rd, Hartford, CT 06114*
Device Identification Number *82957*
Test Kit Serial # _____ Calibration Date _____

RPD☑ DCVA☐ PVB☐ SRVB☐
Make *WATTS* Model No. *909*
Size *2.00* Serial No. *82957*
Test After Installation ☐
Test After Repairs ☐
Annual Test ☐
Other _____ ☐

Reduced Pressure Backflow Prevention Device Assembly (RPD)

Check Valve No. 1	Check Valve No. 2 Tightness	Flow Condition Evaluated	Relief Valve DP Opening Point	Check Valve No. 2 DP
Closed Tight ☐ Leaked ☐ _____.__ PSID	Closed Tight ☐ Leaked ☐	Flow ☐ No-Flow ☐	Opened at PSID _____.__ Did Not Open ☐	_____.__ PSID

Pressure Vacuum Breaker (PVB) Spill Resistant Vacuum Breaker (SRVB)

Check Valve DP	Flow Condition Evaluated
_____.__ PSID	Flow ☐ No-Flow ☐

Double Check Valve Device Assembly (DCVA)

Backpressure Test		Check Valve No. 1 DP	Check Valve No. 2 DP	Flow Condition Evaluated
TC#1 PSI	TC#4 PSI	_____.____ PSID	_____.____ PSID	Flow ☐ No-Flow ☐

Air Inlet Valve DP Opening Point

Opened at _____.____
PSID
Did Not Open ☐

At the time of the test, the downstream shut-off valve was: Closed Tight ☐ Leaked ☐ Not Tested ☐

Line Pressure _____PSI | Protection Type: Service Line ☐ Fire Service Line ☐ Internal Domestic Plumbing System ☐

Signature of Certified Tester

PASS ☐ FAIL ☐ OTHER ☐

Test Witnessed by:

Water Works Official

Owner Agent

State Official

Remarks

Service Restored ☐

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Results of test to be submitted to: CrossConnections@themdc.com

Backflow Prevention Device Assembly Annual Test Report Form

Testing Company Name_____
Testing Company Address_____
Testing Company phone # _____

Date_____ Time _____
Tested by_____
DWBT _____
MDC tag # (if available)_____

RPD☑ DCVA☐ PVB☐ SRVB☐

Owner of Property *Mira Waste Proc. Facility*
Mailing Address *300 Maxim Road, Hartford, CT 06114*
Owner's Email _____
Contact Person *Abdul Rabah*
Device Address *300 Maxim Rd, Hartford, CT 06114*
Device Identification Number *82988*
Test Kit Serial # _____ Calibration Date _____

Make *WATTS* Model No. *909*
Size *2.00* Serial No. *82988*
Test After Installation ☐
Test After Repairs ☐
Annual Test ☐
Other _____ ☐

Reduced Pressure Backflow Prevention Device Assembly (RPD)

Check Valve No. 1	Check Valve No. 2 Tightness	Flow Condition Evaluated	Relief Valve DP Opening Point	Check Valve No. 2 DP
Closed Tight ☐ Leaked ☐ _____.__ PSID	Closed Tight ☐ Leaked ☐	Flow ☐ No-Flow ☐	Opened at PSID _____.__ Did Not Open ☐	_____.__ PSID

Pressure Vacuum Breaker (PVB) Spill Resistant Vacuum Breaker (SRVB)

Check Valve DP	Flow Condition Evaluated
_____.__ PSID	Flow ☐ No-Flow ☐

Double Check Valve Device Assembly (DCVA)

Backpressure Test		Check Valve No. 1 DP	Check Valve No. 2 DP	Flow Condition Evaluated
TC#1 PSI	TC#4 PSI	_____.____ PSID	_____.____ PSID	Flow ☐ No-Flow ☐

Air Inlet Valve DP Opening Point

Opened at _____.____
PSID
Did Not Open ☐

At the time of the test, the downstream shut-off valve was: Closed Tight ☐ Leaked ☐ Not Tested ☐

Line Pressure _____PSI | Protection Type: Service Line ☐ Fire Service Line ☐ Internal Domestic Plumbing System ☐

Signature of Certified Tester

PASS ☐ FAIL ☐ OTHER ☐

Test Witnessed by:

Water Works Official

Owner Agent

State Official

Remarks

Service Restored ☐

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Backflow Prevention Device Assembly Annual Test Report Form

Results of test to be submitted to: CrossConnections@themdc.com

Testing Company Name_____
Testing Company Address_____
Testing Company phone # _____

Date_____ Time _____
Tested by_____
DWBT _____
MDC tag # (if available)_____

RPD☑ DCVA☐ PVB☐ SRVB☐

Owner of Property *Mira Waste Proc. Facility*
Mailing Address *300 Maxim Road, Hartford, CT 06114*
Owner's Email _____
Contact Person *Abdul Rabah*
Device Address *300 Maxim Rd, Hartford, CT 06114*
Device Identification Number *292136*
Test Kit Serial # _____ Calibration Date _____

Make *WATTS* Model No. *909*
Size *1.00* Serial No. *292136*
Test After Installation ☐
Test After Repairs ☐
Annual Test ☐
Other _____ ☐

Reduced Pressure Backflow Prevention Device Assembly (RPD)

Check Valve No. 1	Check Valve No. 2 Tightness	Flow Condition Evaluated	Relief Valve DP Opening Point	Check Valve No. 2 DP
Closed Tight ☐ Leaked ☐ _____.__ PSID	Closed Tight ☐ Leaked ☐	Flow ☐ No-Flow ☐	Opened at PSID _____.__ Did Not Open ☐	_____.__ PSID

Pressure Vacuum Breaker (PVB) Spill Resistant Vacuum Breaker (SRVB)

Check Valve DP	Flow Condition Evaluated
_____.__ PSID	Flow ☐ No-Flow ☐

Double Check Valve Device Assembly (DCVA)

Backpressure Test		Check Valve No. 1 DP	Check Valve No. 2 DP	Flow Condition Evaluated
TC#1 PSI	TC#4 PSI	_____.____ PSID	_____.____ PSID	Flow ☐ No-Flow ☐

Air Inlet Valve DP Opening Point

Opened at _____.____
PSID
Did Not Open ☐

At the time of the test, the downstream shut-off valve was: Closed Tight ☐ Leaked ☐ Not Tested ☐

Line Pressure _____PSI | Protection Type: Service Line ☐ Fire Service Line ☐ Internal Domestic Plumbing System ☐

Signature of Certified Tester

PASS ☐ FAIL ☐ OTHER ☐

Test Witnessed by:

Water Works Official

Owner Agent

State Official

Remarks

Service Restored ☐

SN	LOCATION	TYPE	MAKE	SIZE	MODEL	LAST TEST
401037	S/Side Of Bldg. At Street Inside Hotbox (Fire)	DCVA	WATTS	10.00	709	6/20/2024
485335	Mech. Rm. S/Wall (Boiler Mk-Up)	RPBP	WATTS	0.75	909	6/20/2024
82957	Mech. Rm. S/Wall (Plant Wtr.)	RPBP	WATTS	2.00	909	6/20/2024
82988	Mech. Rm. S/Wall (Plant Process Wtr.)	RPBP	WATTS	2.00	909	6/20/2024
292136	Located On West Wall in Parts Warehouse For Fire Glycol Loop .By Shelves.	RPBP	WATTS	1.00	909	

Attachment B

Natural Gas Service Information

Rev. Date: 5/1/2025

Approximate Visual Area of Pavement Saw-Cut

Natural Gas Service to RTOs Disconnected at Main 11/18/2022

THIS MAP WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY/BOUNDARY OR LIMITED PROPERTY/BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE.

THIS SURVEY AND MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

THE TYPE OF SURVEY PERFORMED IS A TOPOGRAPHIC SURVEY.

THIS SURVEY DOES NOT REFLECT A PROPERTY BOUNDARY OPINION.

THIS SURVEY CONFORMS TO HORIZONTAL ACCURACY CLASS D.

THIS SURVEY CONFORMS TO VERTICAL ACCURACY CLASS D.

ELEVATIONS SEE NOTES.

THIS SURVEY CONFORMS TO TOPOGRAPHIC ACCURACY CLASS D.

THIS SURVEY WAS PREPARED TO SHOW EXISTING CONDITIONS.

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID UNLESS IT BEARS THE LIVE SIGNATURE AND SEAL OF THE UNDERSIGNED SURVEYOR.

LEGEND & ABBREVIATION

- EXISTING BUILDINGS
- BUILDING / ROOF OVERHANG
- DIKE EASEMENT LINE
- TOE AND TOP OF DIKE
- EXISTING EDGE OF CONCRETE PAVEMENT
- EXISTING EDGE OF CONCRETE CURB
- EXISTING EDGE OF BITUMINOUS PAVEMENT
- EXISTING BCLC
- DMH — D — CB — EXISTING STORM SEWERS
- R — R — EXISTING ROOF DRAIN
- S — S — EXISTING SEWER
- G — G — EXISTING GAS MAIN
- W — W — EXISTING WATER SERVICE
- T — T — EXISTING TELEPHONE LINE
- U — U — EXISTING UTILITY LINES
- E — E — EXISTING ELECTRIC LINES
- X — X — EXISTING CHAIN LINK FENCE (CLF)
- EXISTING METAL BEAM GUIDE RAIL
- EXISTING DIKE LINE
- TEMPORARY CONCRETE BARRIER CURB
- EXISTING SPRINKLER SYSTEM

F.Y.	FRONT YARD
S.Y.	SIDE YARD
R.Y.	REAR YARD
EXIST.	EXISTING
CONC.	CONCRETE
BCLC	BITUMINOUS CONCRETE LIP CURB
TF	TOP OF FRAME
FL	FLOW LINE
CB.	CATCH BASIN
MH.	MANHOLE
DMH	DRAINAGE MANHOLE
SMH	SANITARY MANHOLE
GV	GAS VALVE
SV	SPRINKLER VALVE
HH	HANDHOLE
WG	WATER GATE
	LIGHT POLE
	SIGN
	BOLLARD
	ROOF DRAIN
EH	ELECTRIC MANHOLE
MBR	METAL BEAM RAIL

NOTES

1. DATUM NOT DOCUMENTED ON REFERENCED PLANS. THE SAME DATUM MAY NOT BE USED FOR ALL ITEMS.

REFERENCE IS MADE TO MAPS TITLED:

REF. MAP #1
"IMPROVEMENT LOCATION SURVEY, PLAN SHOWING AS-BUILT LOCATION OF MANEUVERING HALL", FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY, MAXIM ROAD, HARTFORD, CONNECTICUT, SCALE 1"=40', DATED 07/12/2001 BY CLOSE, JENSEN & MILLER, P.C., WETHERSFIELD, CONNECTICUT.

REF. MAP #2
"MCAPS PHASE 1, WPF SITE PLAN, MID-CONNECTICUT PROJECT AIR PROCESSING SYSTEM" PREPARED FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY, 300 MAXIM ROAD, HARTFORD, CONNECTICUT, PLAN NUMBER C-2, SCALE 1"=30', DATED 01/10/2002 BY KEYSPAN ENERGY MANAGEMENT, OLD LYME, CONNECTICUT.

REF. MAP #3
"MCAPS PHASE II A NATURAL GAS LINE ROUTING, MID-CONNECTICUT PROJECT AIR PROCESSING SYSTEM" PREPARED FOR CONNECTICUT RESOURCES RECOVERY AUTHORITY, 300 MAXIM ROAD, GATE 70, HARTFORD, CONNECTICUT, PLAN NUMBER NG-1, SCALE 1"=40', DATED 10/16/2000 BY KEYSPAN ENERGY MANAGEMENT, OLD LYME, CONNECTICUT.

REF. MAP #4
SKETCH OF SPRINKLER SYSTEM BY NEW ENGLAND IRRIGATION INC.

REF. MAP #6
"SITE PLAN" CRRA MID-CONNECTICUT WPF/SITE IMPROVEMENT PROJECT, MAXIM ROAD AND RESERVE ROAD, HARTFORD, CONNECTICUT, SCALE 1"=30', DATED APRIL 15, 1997, REVISED 05/12/1998 BY HRP ASSOCIATES, INC., PLAINVILLE, CONNECTICUT.

REF. MAP #1A
"SPCC SITE PLAN" MID-CT WASTE PROCESSING FACILITY PREPARED FOR CONNECTICUT RESOURCE RECOVERY AUTHORITY, HARTFORD, CONNECTICUT, SHEET 1 OF 1, SCALE 1"=60', DATED MARCH 2002 BY MALCOLM PIRNIE, INC.

REF. MAP #7
"SITE PLAN" CRRA MID-CONNECTICUT, WPF/UNDERGROUND STORAGE TANK, 300 MAXIM ROAD, HARTFORD, CONNECTICUT, SHEET NO. 2, SCALE 1"=4'-0", DATED APRIL 28, 1997 BY HRP ASSOCIATES, INC, PLAINVILLE, CONNECTICUT.

REFERENCE # 5
INFORMATION PROVIDED BY DUTTON & JOHNSTON, LLC BY FIELD INSPECTION.

SCALE IN FEET: 80' 40' 0 40' 80'

DUTTON & JOHNSTON, LLC
LAND SURVEYORS AND CIVIL ENGINEERS
67 EASTERN BOULEVARD
GLASTONBURY, CONNECTICUT 06033
TEL: (860)633-2401 FAX: 800-638-3851
EMAIL:DJTOMLL@AOL.COM

STATE OF CONNECTICUT JAMES W. DUTTON 10074 LICENSED LAND SURVEYOR

JAMES W. DUTTON, L.S. #70074

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EXISTING CONDITIONS PLAN WASTE PROCESSING FACILITY

300 MAXIM ROAD, HARTFORD, CONNECTICUT
PREPARED FOR
CONNECTICUT RESOURCES RECOVERY AUTHORITY
HARTFORD, CONNECTICUT

REVISIONS:

DATE: 07/02/2003
SCALE: 1"=40'
SHEET 1 OF 2

A-03-019-S1

FILE: 03019.DWG

Revisions	"A" ISSUED FOR BID AND CONSTRUCTION 6-6-90	"00" ISSUED FOR CONSTRUCTION 6-6-90	"01" FINAL PARTS BUILDING LOCATION 6-15-90	"02" ISSUED FOR CONSTRUCTION 9-13-90	"03" COORDINATES ADDED 10-29-90	"04" REISSUED FOR SITE FINISH CONSTRUCTION 6/1/92

LEGEND

PROPOSED	DESCRIPTION	EXISTING
	TELEPHONE(BURIED)	EXISTING (BY OTHERS)
4"G	GAS LINE	4"G
8"SA	SAN SEWER	8"SA
8"SD	STORM DRAIN	8"SD
6"WW	WASTE WATER	6"WW
4"PW	PROCESS WATER	4"PW
6"DW	DOMESTIC WATER	6"DW
8"FP	FIRE PROTECTION WATER	8"FP
	HYDRANT	
	GATE VALVE	
	GATE VALVE - (W/INDICATOR POST)	
	MAN HOLE (MH)	
45°	ANGLE IN DEGREES OF PIPE BEND	45°
	WORK BY OTHERS	
E	DUCT BANK	E
	BUILDING	
2"CU	CURB STOP 2" COPPER LINE	

EX.TEL
EX.4"G
EX.8"SAN
EX.8"W

NOTES

1. ALL WATER PIPING 3" AND LARGER TO BE CLASS 54, D.I., CEMENT LINED.
2. ALL WATER PIPING 2" AND SMALLER TO BE TYPE K COPPER TUBING, SOFT DRAWN.
3. ALL SANITARY AND WASTE PIPING TO BE PVC, ASTM D-3034, SDR 35, UNLESS OTHERWISE NOTED.
4. MAINTAIN 10'-0" MIN. HORIZONTAL CLEARANCE BETWEEN PARALLEL WATER MAINS, UNLESS OTHERWISE NOTED.
5. FIRE HYDRANTS SHALL BE LOCATED 2'-0" OFF CURB LINE & INCLUDE FOUR (4) - 8" BOLLARDS
6. SLOPES OF SANITARY AND WASTE SEWERS, INCLUDING BUILDING SERVICES TO BE AS NOTED.
7. UTILITY SERVICES TO TERMINATE 10'-0" FROM FOUNDATION UNDER THIS CONTRACT UNLESS OTHERWISE NOTED.
8. ALL WATER MAIN BENDS AND WW FORCE MAIN BENDS SHALL HAVE THRUST BLOCKS.
9. WATER MAIN JOINTS SHALL BE PULLED TO OBTAIN PROPER ALIGNMENT. JOINT DEFLECTION SHALL NOT EXCEED THE MANUFACTURERS RECOMMENDATIONS.
10. ALL GATE VALVES W/INDICATOR POSTS SHALL INCLUDE FOUR (4) - 8" BOLLARDS.
11. ALL EXIST. FITTINGS TO BE REMOVED & NOT RELOCATED SHALL BE RETURNED TO THE CONSTRUCTION MANAGER.
12. DISRUPTION OF FIRE PROTECTION WATER SERVICE IS PROHIBITED, EXCEPT DURING TRANSITION (EXIST. TO PROP.) ALL TRANSITIONS SHALL BE COMPLETED AS QUICKLY AS POSSIBLE AND SHALL BE COORDINATED WITH THE CONSTRUCTION MGR.
13. UTILITY CONNECTION COORDINATES WILL BE PROVIDED PRIOR TO CONSTRUCTION.
14. ALL UTILITY ROAD CROSSINGS SHALL BE COORDINATED WITH THE CONSTRUCTION MANAGER.

RECOMMENDED CONSTRUCTION SEQUENCING

THE UTILITY SYSTEMS SHALL BE CONSTRUCTED IN THE FOLLOWING SEQUENCE.
1.) SOUTHERN (FP, PW, DW, E, WW, & SA)
2.) NORTHEAST (FP & DW)
3.) NORTHEAST (FP, DW, E, & WW)

WW PUMP STATION
WEST R.D.F. STORAGE AREA EXPANSION
EAST R.D.F. STORAGE AREA EXPANSION
PARTS STORAGE BUILDING
NON-PROCESSABLE WASTE LOADOUT
M.S.W. AREA EXPANSION
NEW DUCT BANK
EXIST. 3 HR. FIRE RATED WALLS
GAS METER & CONC. SUPPORT PAD
SEE SHEET C11 FOR LIFT STATION LOCATION
FLOW MEASURING & SAMPLING STATION
PRECAST CONC. GREASE TRAP
MAXIM ROAD
CONNECTICUT RIVER
Storage Area
Parking
Paved Parking
Gravel Parking
Power Line
Wet Area
Active 2" Gas Service to Mechanical Room
4" Gas Main on South Side of Maxim Road

STA. 1+28 TO 1+34.10 8" DUCTILE IRON PIPE
10"x6" TEE, G.V. & F.H. W/THRUST BLOCK
REMOVE & RELOCATE EXIST. F.H. & G.V.
2" CAP INV=18.0 333184.0070 N 626948.2977 E SEE NOTE NO.13
STA. 1+92 NEW MH. INV=16.50 RIM=21.3
8" G.V. CONNECT TO EXIST. 8" FP.
8"x8"x8" TEE (UP) 8" CAP @ ELEV.=23.67 333016.9743 N 626875.0005 E SEE NOTE NO.13
10"x8" TEE W/THRUST BLOCK
STA. 0+00 TO 0+36, 8" DUCTILE IRON PIPE
REMOVE EXIST. 22 1/2° BEND, CONNECT TO 10" F.P. PLUG EXIST. 10" F.P. (TEST PIT)
REMOVE EXIST. 45° BEND, CONNECT TO 4" PW, PLUG EXIST. 4" PW (TEST PIT)
TAP 4" P.W. W/3/4" CORPORATION STOP (TEST PIT)
STA. 0+00 CONNECT TO EXIST. MH., PLUG EXIST. 8" W.W. INV.=15.73
90° SWEEP BEND, CONNECT TO EXIST 3/4" P.W., PLUG EXIST. 3/4" P.W.
RELOCATED ELECTRIC SERVICE, SEE E1
4" CAP @ ELEV 19.45 332671.0636 N 627149.9903 E SEE NOTE NO.13
4"x4" WYE (INV=8.10)
4" 45° BEND (INV=12.10)
2" CAP INV=17.8 332607.3033 N 626926.7273 E SEE NOTE NO.13
REMOVE EXIST. BOLLARD AND MODIFY EXIST. WW PUMP STATION
CONNECT TO EXIST. 2"G w/45° BEND, PLUG EXIST. 2"G (TEST PIT)
2" PVC SCH 80 IN SAME TRENCH
CONNECT TO EXIST. 2" LG w/45° BEND, PLUG EXIST. 2"G (TEST PIT)
REMOVE EXIST. 45° BEND, CONNECT TO 4" PW, PLUG EXIST. 4" PW (TEST PIT)
REMOVE EXIST. 45° BEND, CONNECT TO 4" P.W., PLUG EXIST. 4" P.W. (TEST PIT)
CAP 10" FP W/FLANGED CAP & THRUST BLOCK
CURB STOP, CURB BOX AND CONCRETE COLLAR (TYP.)
CAP (TYP.)
STA. 0+00 CONNECT TO EXIST. SMH, PLUG EXIST. 6" SA, INV.=13.95
4" DUCTILE IRON WW FORCE MAIN, SEE SHT. C9
6" SA S=0.0057 DUCTILE IRON PIPE
10"x10" TAPPING SLEEVE & V. W/THRUST BLOCK (TEST PIT)
4" DUCTILE IRON WW FORCE MAIN SEE SHT. C9
10" INV. EL. 12.24' 8" INV. EL. 12.41'
16" DI PIPE (CL 54) SEE NOTE NO. 9
16"x8" TAPPING SLEEVE AND VALVE W/8" REDUCER
8"x6" TAPPING VALVE AND SLEEVE
4" CAP @ ELEV=19.45 332579.4262 N 627130.6705 E SEE NOTE NO.13
8"x6" TAPPING VALVE AND SLEEVE
6"x6"x8" TAPPING SADDLE & VALVE. SEE NOTES
EXIST 4" PW AND 10" FP TO BE ABANDONED
STA. 1+27 6" CAP INV=14.68
EXIST 6" SA & 3/4" DW ABANDONED
PLUG 6" SA
PLUG 3/4" DW
PLUG (TYP.)
CURB STOP & CURB BOX (TYP.)
CURB STOP CURB BOX
REMOVE EXIST. MH, PLUG EXIST. 8" W.W.
8" W.W. S=0.004
REMOVE EXIST. 8" W.W.
EXIST. 8" W.W., 4" P.W., 10" F.P. & 3/4" P.W. TO BE ABANDONED
PLUG EXIST 4" PW
REMOVE & RELOCATE EXIST. F.H. & G.V.
(2) PLUG EXIST. 4" P.W., SEE NOTE NO.13
2" CU DOMESTIC WATER CONNECT TO EXIST. 2" WATER SEE SHT. P5
4"x4" TEE & G.V. W/THRUST BLOCK (TEST PIT)
RELOCATED ELECTRIC SERVICE, SEE E1
ELECTRICAL MANHOLE COORDINATES: N333,313 E626,945
STA. 3+00 CONNECT TO EXIST. PUMP STATION INV=16.97
REMOVE EXIST. 45° BEND, CONNECT TO 4" P.W. W/G.V., PLUG EXIST. 4" PW.
REMOVE & RELOCATE 4" GV
CONNECT TO EXIST. 10" G.V. W/45° BEND & THRUST BLOCK, PLUG EXIST. 10" FP
2" CAP INV=17.2 333185.7324 N 627185.4762 E SEE NOTE NO.13
10"x6" TEE, G.V. & F.H. W/THRUST BLOCK
EXIST. 10" FP & 4" PW TO BE ABANDONED
REMOVE & RELOCATE EXIST. 8" GV.
CONC. ENCASE 8" FP 5' EITHER SIDE CONC. RAMP
10"x8" TEE & 8" G.V. W/THRUST BLOCK
8"x8"x8" TEE (UP), 8" CAP @ ELEV. 23.67 333062.0763 N 627195.0983 E SEE NOTE NO.13
SADDLE CORPORATION STOP, CURB STOP & CURB BOX (TYP.)
8" G.V. CONNECT TO EXIST. 8" FP.
EXIST 10" FP & TO BE ABANDONED
REMOVE & RELOCATE EXIST. F.H. & G.V.
8" 90° BEND (UP) 8" CAP @ ELEV.=23.67 332975.0319 N 627261.5637 E SEE NOTE NO.13
CURB STOP CURB BOX AND CONCRETE COLLAR (TYP.)
PLUG (TYP.)
10"x6" TEE, G.V. & F.H. W/THRUST BLOCK
10"x8" TEE & G.V. W/THRUST BLOCK
CONNECT TO EXIST. WW PUMP STATION, CORE DRILL & GROUT NEW 4" WW INLET PIPE @ INV.=7.75
CONNECT TO 10" FP W/45° BEND & THRUST BLOCK, PLUG EXIST. 10" F.P. (TEST PIT)
CONNECT TO EXIST. WW PUMP STATION DISCHARGE, SEE C9
REMOVE EXIST. 8" WW.
CONNECT TO EXIST. 4" PW W/45° BEND & THRUST BLOCK, PLUG EXIST. 4" PW (TEST PIT)
CONNECT TO EXIST. 3/4" DW W/45° BEND & THRUST BLOCK, PLUG EXIST. 3/4" DW (TEST PIT)
EXIST. 6" DW TO BE PROTECTED.
ABANDON EXIST. 8" WW & WW MANHOLE.
REMOVE EXIST. 45° BEND, CONNECT TO EXIST. 10" FP, PLUG EXIST. 10" FP (TEST PIT.)
8"-90° BEND (UP) 8" CAP @ ELEV.=23.67 332626.1261 N 627124.6320 E SEE NOTE NO.13
2" PW
2" CAP INV=17.4 332582.9760 N 627300.1965 E SEE NOTE NO.13
4" DUCTILE IRON WW FORCE MAIN SEE NOTE NO. C9
CONC. ENCASE 4" WW FORCE MAIN TO EITHER SIDE OF PROP WATER (LENGTH = 105') SEE DETAIL C7
10"x8" TEE & 8" G.V. W/THRUST BLOCK
EX. 8" SAN
EX. 8" W
MH
CURB STOP CURB BOX

12' R.O.W. IN FAVOR OF THE SOUTHERN NEW ENGLAND TELEPHONE COMPANY BY DEED DATED AUG. 31, 1923. RECORDED IN VOL. 1386, PG. 151, M.L.R.

METROPOLITAN DISTRICT MID CONN PROJECT DRAWING NO. C1-7203

NOTE:
1. WORK INCLUDED IN SITE FINISH CONSTRUCTION PACKAGE IS SHOWN CLOUDED.
2. SEE DWG. C-10 FOR LIMIT OF PAVING.

SCALE: 1" = 40'

Proj. No.	13093
Proj. Mgr.	MNK
Designed	BBB
Drawn	DMS
Checked	DBB
Date	6/13/90

METROPOLITAN DISTRICT MID CONN PROJECT DRAWING NO. C1-7203

Maguire Group Inc.
Architects/Engineers/Planners
225 Foxborough Boulevard
Foxborough, Massachusetts 02035

B.B. BABCOCK 6/6/90 Checked By / Date
M.N. KELLY 6/6/90 Approved By / Date

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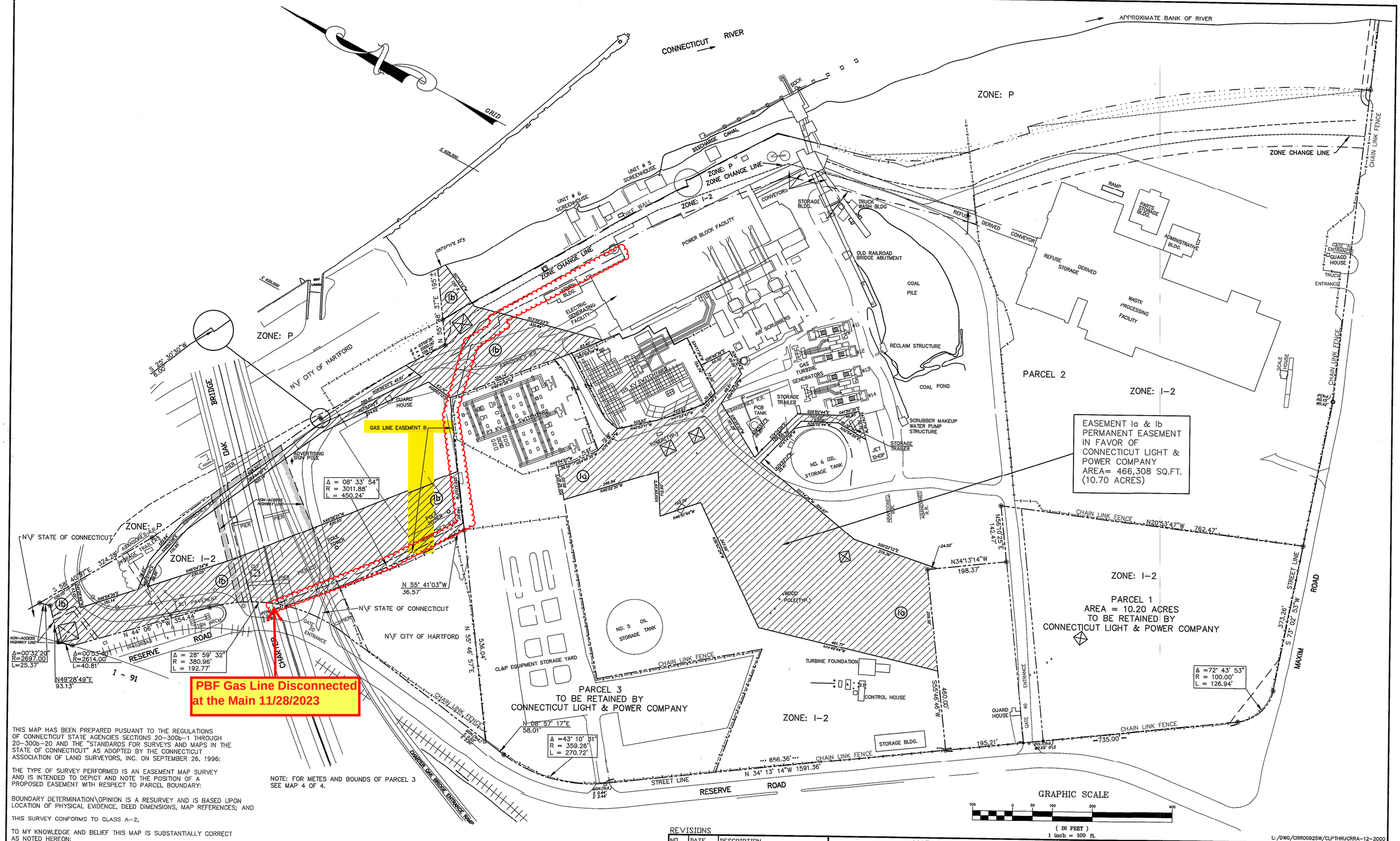
ABB ASEA BROWN BOVERI

ABB RESOURCE RECOVERY SYSTEMS

SITE UTILITY PLAN MODIFICATIONS

CONNECTICUT RESOURCES RECOVERY AUTHORITY
MID-CONNECTICUT PROJECT

DWG. NO. MGI 13098 - C4 REV. "04"



THIS MAP HAS BEEN PREPARED PUSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996:

THE TYPE OF SURVEY PERFORMED IS AN EASEMENT MAP SURVEY AND IS INTENDED TO DEPICT AND NOTE THE POSITION OF A PROPOSED EASEMENT WITH RESPECT TO PARCEL BOUNDARY:

BOUNDARY DETERMINATION\OPINION IS A RESURVEY AND IS BASED UPON LOCATION OF PHYSICAL EVIDENCE, DEED DIMENSIONS, MAP REFERENCES; AND

THIS SURVEY CONFORMS TO CLASS A-2;

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON;

FRANCIS M. SOVA PLS#15771
FOR HRP ASSOCIATES, INC.

THIS MAP IS NOT VALID WITHOUT THE LIVE SIGNATURE AND IMPRESSION TYPE SEAL OF THE SURVEYOR WHOSE SIGNATURE APPEARS HEREON.

NOTE: FOR METES AND BOUNDS OF PARCEL 3 SEE MAP 4 OF 4.

LEGEND
- ⊡ MONUMENT FOUND
- ○ IRON PIN FOUND
- ◉ IRON PIN TO BE SET

EASEMENT Ia AND Ib

REVISIONS

NO.	DATE	DESCRIPTION

MAP SHOWING PROPERTY OF
THE CONNECTICUT LIGHT & POWER COMPANY
TO BE CONVEYED TO
CONNECTICUT RESOURCES RECOVERY AUTHORITY
MAXIM & RESERVE ROADS
HARTFORD, CONNECTICUT

HRP ASSOCIATES, INC.
167 New Britain Avenue
Plainville, CT 06062
(860) 793-6899
FAX: (860) 793-6871
www.hrpassoc.com

FMS SURVEYED	WJG APPROVED	1"=100' SCALE
FMS DRAWN	DEC. 15, 2000 DATE	3 of 4 SHEET NO.
FMS CHECKED	CRR0064SW CRR0067SW CRR0092SW PRDJECT NO.	

L:/DWG/CRR0092SW/CLPTHRUCRRA-12-2000