OSWEGO HARBOR POWER #6 OIL SPILL

OSWEGO, NY

MARCH 8, 2022 – AUGUST 10, 2022

LT IAN JOHNS & LTJG JOSHUA WELSH

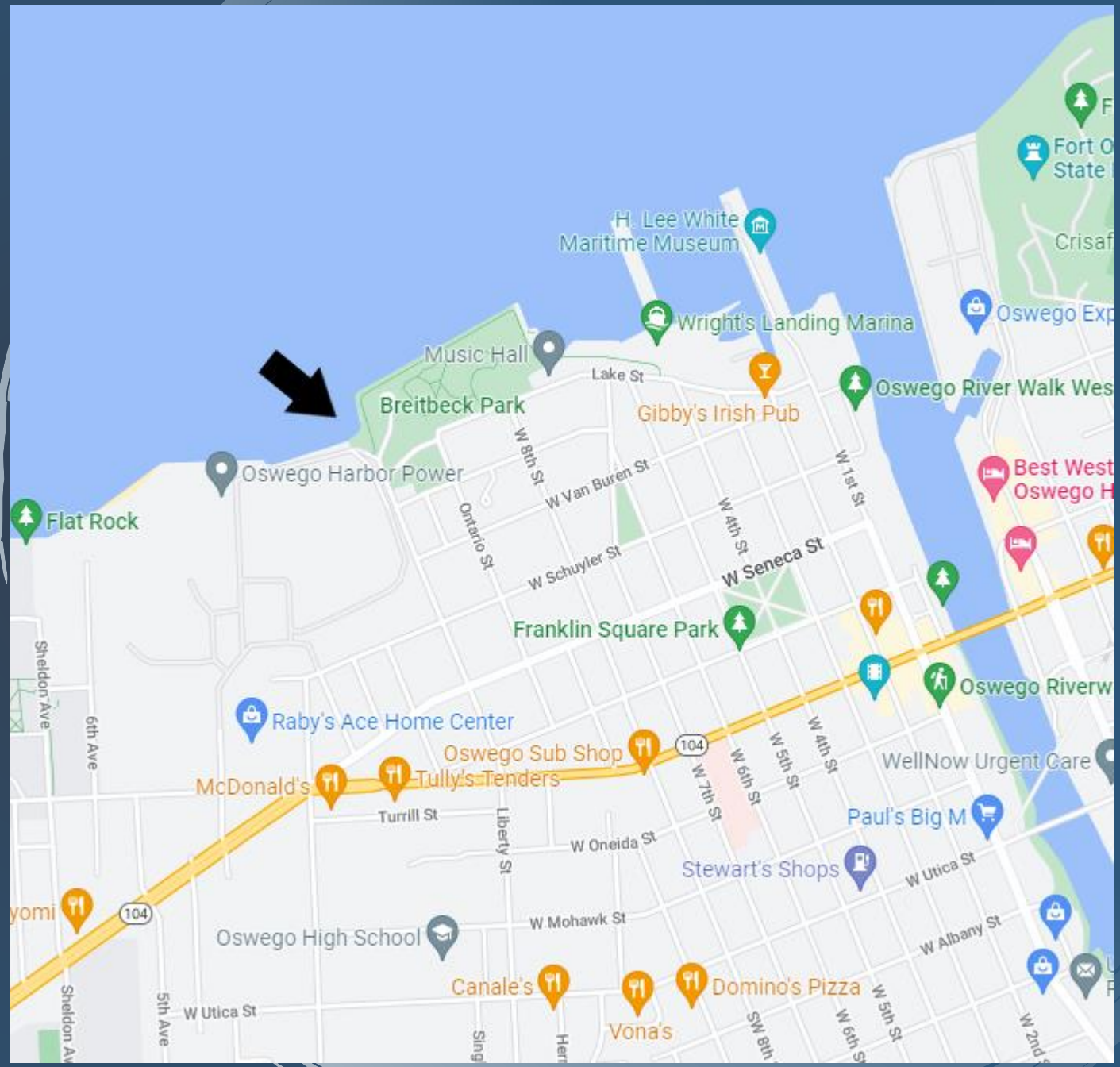
SECTOR BUFFALO / ATLANTIC STRIKE TEAM

INITIAL REPORTING

07MAR2022 1900LT: USCG SECTOR BUFFALO RECEIVED A REPORT FROM A CONCERNED CITIZEN OF A PETROLEUM ODOR IN THE VICINITY OF BREITBECK PARK IN OSWEGO, NY.

CALLER STATED IT WAS TOO DARK TO SEE ANYTHING ON THE WATER.

SECTOR BUFFALO CONTACTED NEW YORK STATE DEPT OF ENVIRONMENTAL CONSERVATION (NY DEC) IN SYRACUSE TO ASSIST DUE TO PROXIMITY.



INITIAL FINDINGS

07MAR2022 2100LT: INITIAL INVESTIGATION REVEALED A THICK BLACK SHEEN IN THE SOUTHWEST CORNER OF BREITBECK PARK.

A BLACK 5’X3’ CONTAINER FLOATING IN THE OIL WAS THOUGHT TO BE THE PROBABLE SOURCE OF THE OIL.

NY DEC HIRED AN OSRO IMMEDIATELY AFTER ARRIVING ON SCENE TO CONTAIN THE OIL AND RECOVER THE BLACK CONTAINER.

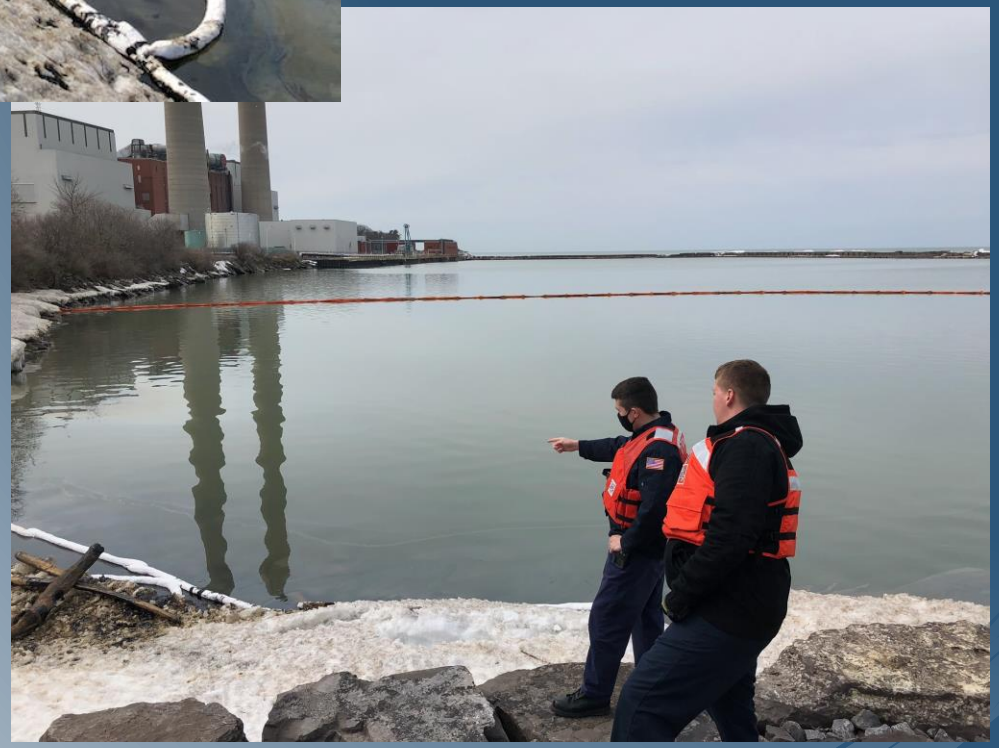
AT APPROXIMATELY 0400 A 600’ SECTION OF OSWEGO HARBOR WAS CONTAINED AND THE CONTAINER WAS REMOVED. OIL RECOVERY BEGAN.

FIRST LIGHT

08MAR2022 0700LT: AFTER FURTHER INVESTIGATION IT WAS DETERMINED THAT THE SOURCE OF THE SPILL WAS NOT THE BLACK CONTAINER.

SECTOR BUFFALO & NY DEC RESPONDERS BEGAN SEARCHING FOR POSSIBLE SOURCES.

OSWEGO HARBOR POWER WAS THOUGHT TO BE THE MOST LIKELY SOURCE DUE TO IT'S CLOSE PROXIMITY.



OSWEGO HARBOR POWER INVESTIGATION

08MAR2022 0800LT: AFTER MEETING WITH FACILITY OPERATIONS PERSONNEL, USCG & NY DEC BEGAN SEARCHING FACILITY GROUNDS FOR POSSIBLE SOURCES.

THE FIRST TWO MANHOLES SEARCHED PRODUCED STRONG PETROLEUM ODORS AND BLACK OIL WAS VISIBLE IN EACH.

ACTIONS TAKEN TO SECURE

ALL FLANGES WERE SECURED ON FACILITY PROPERTY.

TWO INFLATABLE PLUGS WERE PROCURED BY THE OSRO AND INSTALLED IN STORM DRAIN SYSTEM.

HARBOR BOOM WAS PLACED AT THREE OUTFALL LOCATIONS ON FACILITY PROPERTY LINED WITH SORBENT MATERIALS.

FACILITY BEGAN DIGGING UNDERGROUND PIPELINE TO INVESTIGATE FOR SOURCE.


Niagara Mohawk Steam Station
Niagara Mohawk Steam Station
Niagara Mohawk Steam Station
Underground piping from pier to day tank.
Oswego Harbor Power

SOURCE DISCOVERY

INITIAL DIGGING ALONG UNDERGROUND #6 OIL TRANSFER PIPELINE REVEALED HEAVILY OILED SOIL THE COMPLETE LENGTH OF THE PIPELINE.

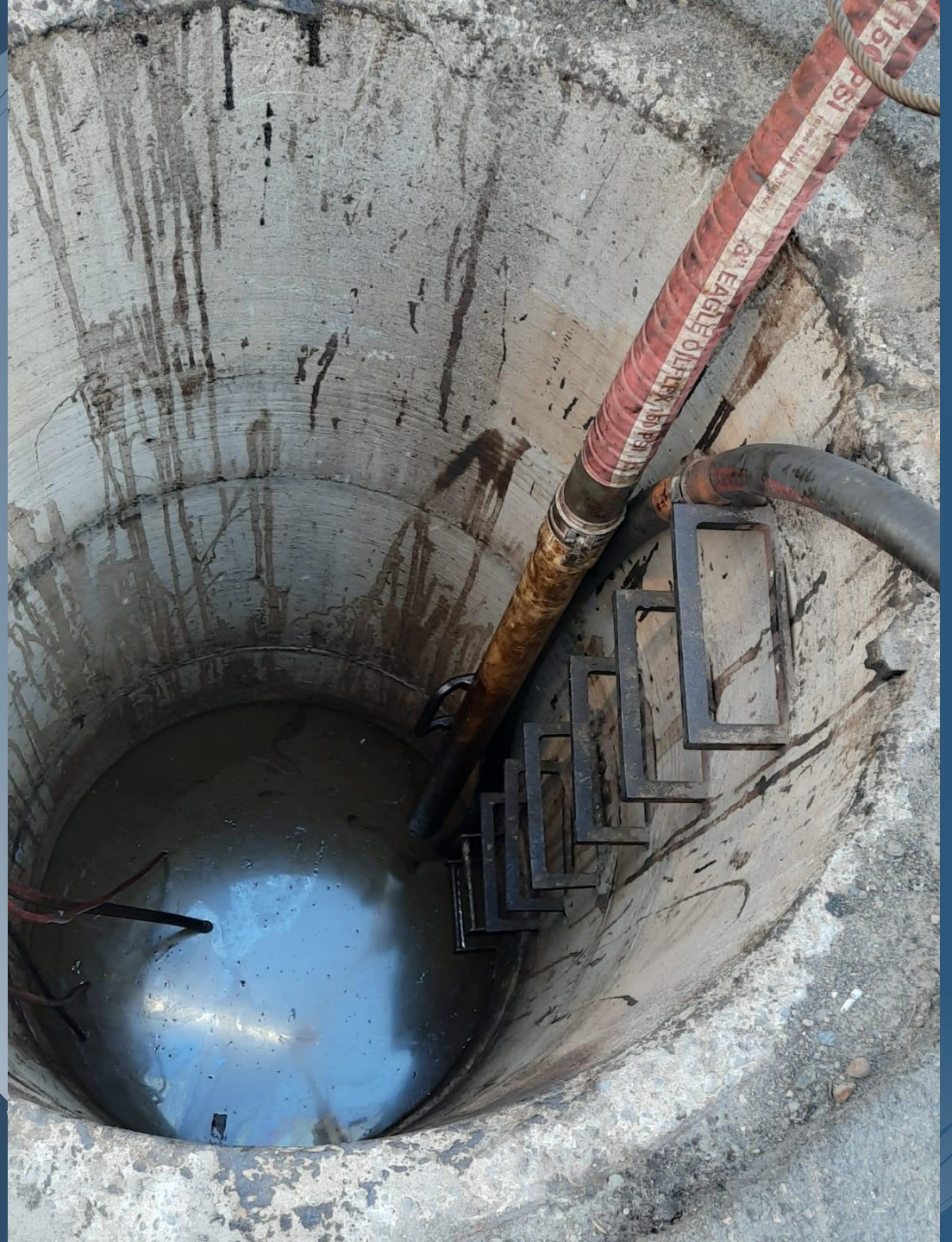
THE 100+’ OF PIPING WAS INSTALLED IN THE 1950S AND SHOWED SIGNS OF HEAVY PITTING.

OIL PIPELINE OVERLAPPED WITH CONCRETE STORM WATER LINES WHICH DISCHARGED INTO LAKE ONTARIO.

DISCHARGE TOTALS

OSWEGO HARBOR POWER DISCHARGED AT LEAST 44,500 GALLONS OF #6 OIL INTO THE SOIL & WATER BASED ON FUEL INVENTORY TAKEN DAYS AFTER INITIAL DISCHARGE IDENTIFICATION INTO LAKE ONTARIO.

THE VAST MAJORITY OF THE DISCHARGE WAS PREVENTED FROM ENTERING LAKE ONTARIO DUE TO QUICKLY SECURING STORM WATER OUTFALLS.



PIPING REMOVAL

SEVERAL FACTORS POSED CHALLENGES TO REMOVING SUSPECTED COMPROMISED PIPING.

PIPING WAS JACKETED ALONG WITH A STEAM LINE. BOTH PIPES WERE COATED WITH AN ASBESTOS CONTAINING PROTECTANT.

THE LINE WAS ORIGINALLY INSTALLED JUST ABOVE THE GROUND WATER LINE WHICH WAS STRUCK MULTIPLE TIMES CAUSING THE EXCAVATION SITE TO FILL WITH WATER.


VOLVO

A CALL FOR ASSISTANCE

SECTOR BUFFALO & NY DEC REACHED OUT FOR ASSISTANCE FROM NUMEROUS SOURCES INCLUDING:

USCG DISTRICT 9

USCG ATLANTIC/GULF STRIKE TEAM

NOAA

EPA

TOWN OF OSWEGO, NY

US FISH & WILDLIFE

CLEANUP EFFORTS & CHALLENGES

OSWEGO HARBOR POWER HIRED NUMEROUS OSROS FROM MAINE TO LOUISIANA TO ASSIST WITH LAND & WATER OIL RECOVERY.

ON-WATER RECOVERY PROVED CHALLENGING DUE TO RIPRAP SHORELINE HEAVILY ICED OVER. MUCH OF THE OIL BECAME TRAPPED UNDER SNOW AND DEBRIS.

OSROS SPENT WEEKS MELTING ICE & SNOW TO REVEAL HEAVY POCKETS OF #6 OIL.

FROZEN GROUND MADE EXCAVATION OF SOURCE SITE SLOWER THAN EXPECTED.

THE DIFFERENCE TECHNOLOGY MAKES

VARIOUS TOOLS WERE USED WHICH MADE SPOTTING OIL, SEDIMENT INVESTIGATIONS & MONITORING OUTFALLS MUCH EASIER.

USCG ATLANTIC STRIKE TEAM PROVIDED AIR DRONE SUPPORT WHICH HELPED SCAT TEAMS COLLECT & DISSEMINATE INFORMATION ALMOST IN REAL-TIME.

SECTOR BUFFALO'S SUBSURFACE REMOTE OPERATED VEHICLE SAVED VALUABLE TIME AS WELL AS MONEY BY MONITORING THE STORM WATER OUTFALL PLUG & ALSO SCOUTING OSWEGO HARBOR FOR POSSIBLE SUNKEN OIL.


2022/03/30 STATUS
15:38:27
100
100
FILE SAVING. DO NOT REMOVE STORAGE DEVICE
SAVED: 2022-03-30_15-38-27_DEEP_TREKKER.JPG
-1°
15°
2
TURNS
0°C
TEMP
2°
ROLL
-2°
PITCH
S
195°
W
16°
CAMERA
1.9M
DEPTH

INSPECTING THE PIPELINE

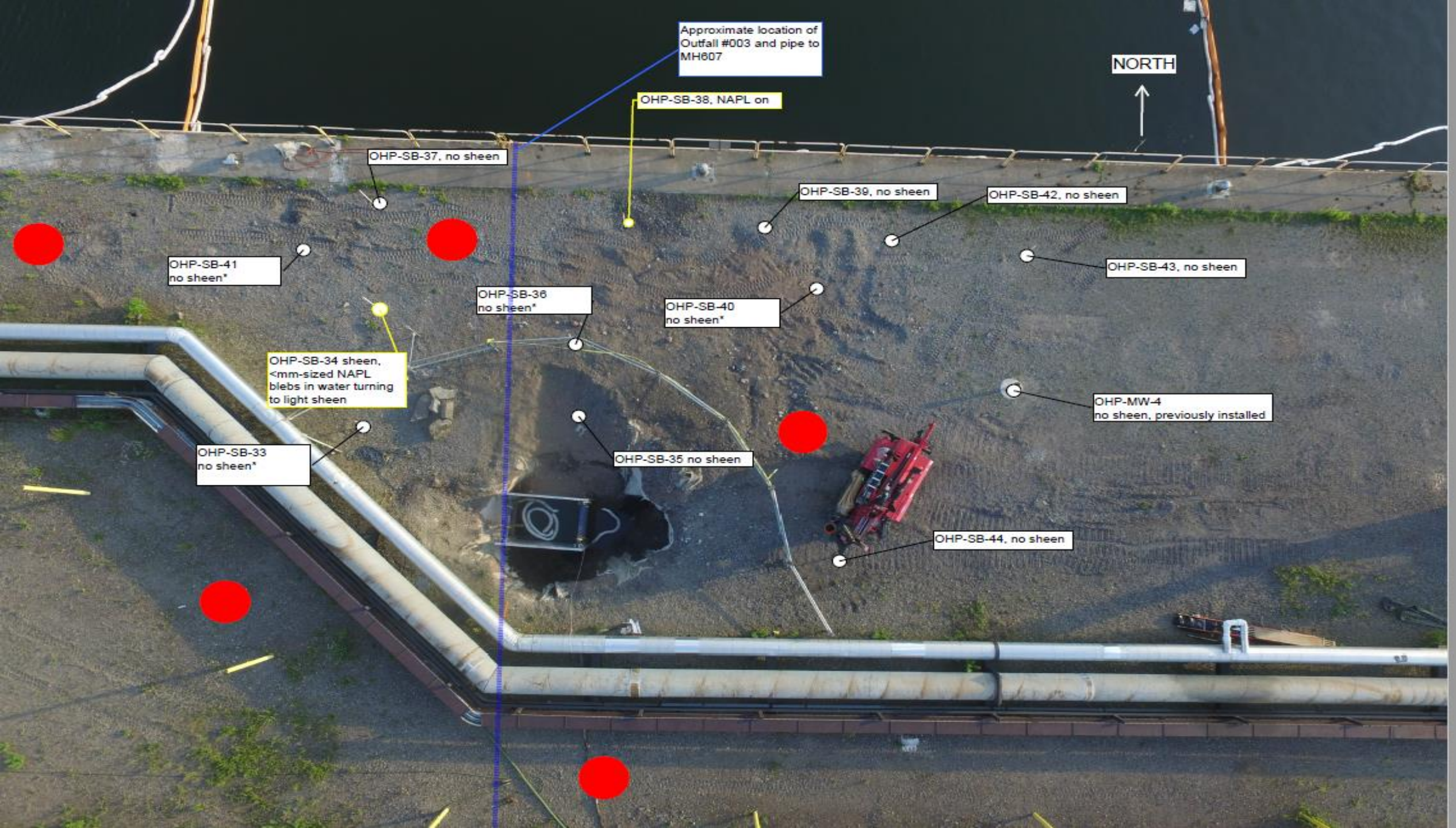
NUMEROUS PIPELINE EXPERTS WERE BROUGHT IN BY THE RESPONSIBLE PARTY TO INVESTIGATE THE CAUSE OF THE DISCHARGE.

ULTRASONIC TESTS REVEALED DOZENS OF INTEGRITY ISSUES OF THE INTERNAL STRUCTURING ALONG THE 100’ OF PIPING THAT WAS REMOVED.

GROUNDWATER TESTING

GROUNDWATER EXPERTS WERE BROUGHT IN TO DETERMINE HOW FAR THE UNDERGROUND PLUME HAD SPREAD.

43 GROUND WELLS WERE STRATEGICALLY DRILLED AT VARIOUS DISTANCES FROM THE SOURCE TO DETERMINE EXTENT OF OIL COVERAGE.


Approximate location of Outfall #003 and pipe to MH607
NORTH
OHP-SB-38, NAPL on
OHP-SB-37, no sheen
OHP-SB-39, no sheen
OHP-SB-42, no sheen
OHP-SB-41 no sheen*
OHP-SB-43, no sheen
OHP-SB-36 no sheen*
OHP-SB-40 no sheen*
OHP-SB-34 sheen, <mm-sized NAPL blebs in water turning to light sheen
OHP-MW-4 no sheen, previously installed
OHP-SB-33 no sheen*
OHP-SB-35 no sheen
OHP-SB-44, no sheen

RECOVERY TOTALS

APPROXIMATELY 18,000 GALLONS OF PRODUCT WAS RECOVERED BY EXCAVATION. THE OILED SOIL WAS TAKEN TO A LOCAL LANDFILL FOR REMEDIATION.

4,200 GALLONS OF LIQUID OIL WAS RECOVERED VIA VACUUM TRUCKS FROM STORM DRAIN, TOP WATER SKIMMING AND GROUND WATER.

43 TONS (18 ROLL-OFF CONTAINERS) OF OIL-IMPACTED DEBRIS.

1.4 MILLION GALLONS OF WASTEWATER WAS TREATED AND RETURNED TO LAKE ONTARIO.


ADLER
ADLER
ADLER

REFILL OF SOURCE SITE

AFTER REMOVAL OF THE MAJORITY OF OIL AT THE SOURCE SITE, THE AREA WAS FILLED WITH GYPSUM AND CLEAN SOIL.

OIL TRANSFER PIPING HAS SINCE BEEN REPLACED WITH AN ABOVE GROUND RACK SYSTEM.

SECURING THE OUTFALL

THE ORIGINAL OUTFALL CONCRETE PIPING WAS BROKEN IN MANY PLACES WHICH CAUSED THE OIL TO ENTER THE SYSTEM. INSTEAD OF REPLACING THE WHOLE OUTFALL SYSTEM, USING A SLEEVE WAS APPROVED.

A CUSTOM 120’ HDPE PIPE WAS ORDERED AND FUSED TOGETHER ON SITE. THE PIPE WAS INSTALLED USING A VESSEL AND WINCH SYSTEM.

QUESTIONS?

LT IAN JOHNS

IAN.O.JOHNS@USCG.MIL

LTJG JOSHUA WELSH

JOSHUA.J.WELSH@USCG.MIL

MST1 CHRIS AHERN

CHRISTOPHER.M.AHERN@USCG.MIL