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Monthly Oversight Report 28
ACS NPL Site
Griffith, Indiana
March 29, 2003 - May 2, 2003

BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/RAC VII
American Chemical Services RAO (057-ROBF-05J7)

BVSPC Project 46526
BVSPC File C.3
May 9, 2003

5-15-03

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report No. 28 for April 2003

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 28 for April 2003 for the American Chemical Services Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M Campbell

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 28
ACS Superfund Site WA57, 46526.238

Reporting Period: Month of April (March 29, 2003 - May 2, 2003)
BVSPC O/S Dates: April 3, 8, 17, 23, 24, and May 1, 2003

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Indiana Department of Environmental Management	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	4	ONCA SBPA ISVE System Yard Piping Contractor
Great Lakes Soil & Environmental Testing	1	ONCA SBPA Clay Compaction Testing Contractor
Area Survey	2	Surveying Contractor
Austgen	3	Electrical Contractor
Ryan Construction	2	General Contractor
Vidimos	1	Metal Fabricator
US Floors	3	Flooring Contractor
Simalabs	1	GWTP Sampling Contractor

Construction Activities

Major Activities:

- Independent Environmental Services backfilled around the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells and began pouring concrete pads for the flushmount wells.
- Great Lakes Soil & Environmental Testing tested the compaction and moisture of the clay backfill for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction wells.
- Area Survey surveyed the location of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.

- Independent Environmental Services installed check valves in the air supply lines to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system dual phase extraction wells.
- Ryan Construction disassembled the Off-Site Containment Area in-situ soil vapor extraction system scrubber, removed the packing, and reassembled the unit.
- Vidimos retrofitted the old scrubber to operate as a cyclonic scrubber without packing.
- Montgomery Watson Harza began operating a new set of soil vapor extraction wells from the Off-Site Containment Area in-situ soil vapor extraction system.
- US Floors applied sealer coatings to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system blower shed slab and the sump surrounding the oxidizers at the groundwater treatment plant.
- Ryan Construction began assembling the new thermal oxidizer and scrubber units for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Austgen began installing the programmable logic controller and electrical wiring for the new thermal oxidizer and scrubber system for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Montgomery Watson Harza held weekly construction coordination meetings on April 3, 17, 24, and May 1, 2003. Montgomery Watson Harza did not hold a weekly construction coordination meeting on April 10, 2003, because of limited site activities and a PRP group meeting that was held at the site during the usual construction meeting.

Activities Performed:

Independent Environmental Services (IES) backfilled clay around the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) and vapor phase extraction wells. IES first placed a bentonite seal around the saddle connecting the well to the yard piping. IES then placed a piece of geotextile over the bentonite and began placing and compacting the clay. IES compacted the clay with a jumping-jack compactor and placed the clay in several lifts. Great Lakes Soil & Environmental Testing tested the compaction and moisture of the clay backfill around the DPE wells. Montgomery Watson Harza (MWH) reported that it was requiring IES to meet 95% compaction of the clay backfill. MWH also reported that it is not requiring a set percentage for the moisture of the backfill provided that the clay meets the compaction requirement and is placed moist based on visual inspection. MWH reported that the lowest percent moisture measured was 13%, 2% less than the optimum moisture content.

IES also completed pouring the concrete pads at several of the DPE wells. IES reported that it would pour the concrete pads at 13 perimeter DPE wells after the gravel is placed over the area in order for the concrete truck to access the locations without damaging the pipe. MWH reported that Midwest Environmental, Inc. (MEI) is expected to begin placing the gravel on the ONCA SBPA cover area on May 5, 2003. MWH reported that MEI will complete placing the geotextile over the ONCA SBPA clay cover. MWH reported that Austgen will install the power line to the ONCA SBPA ISVE system blower shed once the gravel has been placed.

Area Survey surveyed the elevations of the ONCA SBPA ISVE system wells in addition to other locations that required surveying.

Independent Environmental Services (IES) installed check valves in the air supply lines to the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) wells. IES installed the valves in the lines in order to maintain a positive pressure in the pumps when they are not operating. During installation activities, IES wore half-face respirators.

Ryan Construction disassembled the OFCA ISVE system scrubber. MWH inspected the packing in the scrubber and observed that it had melted. MWH also inspected the secondary quench nozzles and reported that they were clogged. MWH and Vidimos reconfigured the scrubber unit so that it would operate as a cyclone/vortex system instead of a packed tower. Vidimos installed 12 additional spray nozzles, a directional diffuser, and a manway into the scrubber.

Ryan Construction reassembled the Off-Site Containment Area (OFCA) ISVE system scrubber after removing the damaged packing from the scrubber. On April 8, 2003, Black & Veatch Special Projects Corp. (BVSPC) observed Ryan Construction reconnecting the ducting from the thermal oxidizer to the scrubber unit without proper fall protection. BVSPC brought this to MWH's attention immediately. Ryan Construction immediately climbed down from the work location and put on a harness. Ryan Construction proceeded to tie off to one of the structural beams of the groundwater treatment plant (GWTP). MWH reported that it had discussed fall protection with Ryan Construction during the toolbox health and safety meeting on April 7, 2003. MWH proceeded to reiterate fall protection health and safety with Ryan Construction and reported that it would send a written warning to Ryan Construction should its employees not follow the proper fall protection health and safety requirements.

MWH resumed operating the OFCA ISVE system on April 10, 2003, pulling vapors from the previous set of wells. MWH began operating the following seven wells on April 17, 2003: SVE-9, SVE-15, SVE-19, SVE-21, SVE-22, SVE-24, and SVE-39. MWH reported that it expects to determine whether operating a smaller set of wells at a higher flow rate will demonstrate if a larger capacity blower will be needed for the OFCA ISVE system. MWH reported that if it observes that greater concentrations of VOCs are removed from the subsurface at a higher flow rate, then a larger blower may be needed in order to remove the VOCs more quickly. If MWH does not observe a significant increase in VOC concentrations, then the current capacity of the system may be sufficient. MWH reported that the high pressure pump for the OFCA ISVE system scrubber flooded and malfunctioned on Tuesday, April 22, 2003. MWH replaced the pump on April 23, 2003, and resumed operating the system on April 24, 2003. MWH continued to operate the system with seven wells on-line.

US Floors applied a sealer coat on the ONCA SBPA ISVE system blower shed concrete slab on April 3, 2003. US Floors also applied a sealer coat preparing the new sump located at the GWTP on April 11, 2003. MWH ceased operating the GWTP during application activities, in order to eliminate potential hazard for US Floors working on the new sump around the OFCA ISVE system thermal oxidizer and the catalytic oxidizer.

MWH reported that the ONCA SBPA ISVE system thermal oxidizer and scrubber units were delivered on April 15, 2003. Ryan Construction began installing the units. The system will operate under an induced draft instead of a forced air system as is the case with OFCA ISVE system thermal oxidizer. In addition,

the new scrubber is fabricated from fiberglass reinforced plastic instead of 316 stainless steel. MWH reported that it will test out the new system with vapors from the Off-Site Containment Area (OFCA) ISVE system. Austgen began installing the programmable logic controller (PLC) for the new thermal oxidizer and scrubber. MWH reported that it anticipated that it would start the system in the beginning of May. MWH also reported that the ONCA SBPA ISVE system blower sheds are scheduled to be delivered in mid May.

MWH reported that the GWTP operated at approximately 20 gpm during the reporting period. MWH replaced the pump in monitoring well MW-10C. MWH reported that it continued to pump from a portion of the ONCA SBPA ISVE system DPE wells, as the GWTP is limited by the capacity of the catalytic oxidizer because of the high concentration of volatile organic compounds in the groundwater.

Attached are BVSPC weekly reports No. 109 through 113, correspondence, log book notes, and photographs of the daily activities. BVSPC's crew conducted oversight of the major field activities on April 3, 8, 17, 23, 24, and May 1, 2003. BVSPC's crew attended four weekly construction coordination meetings at the site on April 3, 17, 24, and May 1, 2003. MWH did not hold a weekly construction coordination meeting on April 17, 2003, because of limited site activities and a PRP group meeting that was held at the site during the usual construction meeting.

Topics of Concern:

- MWH reported that there are two areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. Based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received preliminary results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial Design. MWH reported that it will submit a memorandum to the Agency proposing a GCL to meet the infiltration requirements of the final design.

Upcoming Activities:

- MEI to complete placing the geotextile over the ONCA SBPA interim cover and begin placing the gravel.
- IES to complete pouring the concrete pads for the flushmount wells.
- Austgen to complete installing the PLC for the new thermal oxidizer and scrubber.
- Ryan Construction to complete assembling the new thermal oxidizer and scrubber.
- Fliteway to deliver the ONCA SBPA ISVE system blower sheds in early May.

Signature: Leigh Peters Date: May 7, 2003

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Weekly Oversight Summary Report No. 109
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of March 31, 2003.
BVSPC O/S Dates: April 3, 2003 (Ms. Peters).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	4	ONCA SBPA ISVE System Yard Piping Installation Contractor
Great Lakes Soil & Environmental Testing	1	ONCA SBPA Clay Compaction Testing Contractor
Austgen	1	Electrical Contractor
Ryan Construction	2	General Contractor
US Floors	3	Flooring Contractor

Construction Activities

Major Activities:

- Independent Environmental Services began backfilling around the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system wells.
- Great Lakes Soil & Environmental Testing tested the compaction and moisture of the clay backfill for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Ryan Construction disassembled the Off-Site Containment Area in-situ soil vapor extraction system scrubber.
- US Floors applied a sealer coat on the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system blower shed concrete slab.
- Montgomery Watson Harza held the weekly construction coordination meeting on April 3, 2003.

Activities Performed:

Independent Environmental Services (IES) began backfilling clay around the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) and vapor phase extraction wells. IES first placed a bentonite seal around the saddle

connecting the well to the yard piping. IES then placed a piece of geotextile over the bentonite and began placing and compacting the clay. IES compacted the clay with a jumping-jack compactor and placed the clay in several lifts. Great Lakes Soil & Environmental Testing tested the compaction and moisture of the clay backfill at two of the DPE wells. Montgomery Watson Harza (MWH) reported that it was requiring IES to meet 95% compaction of clay backfill. MWH also reported that it is not requiring a set percentage for the moisture of the backfill provided that the clay meets the compaction requirement and is placed moist based on visual inspection. MWH reported that the lowest percent moisture measured was 13%, 2% less than the optimum moisture content. IES continued to pour the concrete pads around the flushmount wells.

MWH reported that the ONCA SBPA ISVE system thermal oxidizer and scrubber units are scheduled to be delivered on April 15, 2003. MWH also reported that the ONCA SBPA ISVE system blower sheds are scheduled to be delivered on April 28, 2003. Austgen continued to perform tasks in preparation for the new equipment.

US Floors applied a sealer coat on the ONCA SBPA ISVE system blower shed concrete slab on April 3, 2003. US Floors also began preparing the new sump located at the groundwater treatment plant (GWTP) in order to apply the sealer coat. US Floors is expected to complete the sealer coat on the GWTP sump next week. MWH ceased operating the GWTP on April 3, 2003, in order to eliminate any potential hazards for US Floors working on the new sump around the Off-Site Containment Area (OFCA) ISVE system thermal oxidizer and the GWTP catalytic oxidizer.

Ryan Construction disassembled the OFCA ISVE system scrubber. MWH inspected the packing in the scrubber and observed that it had melted. MWH also inspected the secondary quench nozzles and reported that they were clogged. MWH is coordinating with Vidimos to redesign the scrubber unit so that it will operate without packing, similar to the catalytic oxidizer scrubber. MWH reported that it is investigating adding spray nozzles to create a vortex/cyclonic air flow within the scrubber. MWH reported that Vidimos is scheduled to be on-site next week.

MWH reported that the GWTP was operating at 25 gpm except when it was shut down for US Floors' work around the oxidizer units. MWH also reported that it was near the target dewatering level for the ONCA SBPA based on measurements from the perimeter piezometers. MWH reported that it will measure the groundwater elevation from the ONCA SBPA ISVE system DPE wells next week to further evaluate the groundwater level. MWH also reported that Area Survey will survey the elevations of the ONCA SBPA ISVE system wells and other various locations that have changed.

MWH held the weekly construction coordination meeting on April 3, 2003.

Topics of Concern:

- MWH reported that there are two thin areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. In addition, based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received preliminary results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial Design. MWH reported that it will continue to evaluate the use of a GCL in the construction of the proposed final cover.

Upcoming Activities:

- Area Survey to survey the ONCA SBPA ISVE system wells and resurvey other well locations.
- IES to complete placing the geotextile over the ONCA SBPA interim cover.
- IES to complete backfilling around the ONCA SBPA ISVE system wells.
- Midwest Environmental, Inc. to place the gravel over the ONCA SBPA interim cover.
- US Floors to complete the sealer coat on the GWTP sump.
- Ryan Construction to reassemble the OFCA ISVE system scrubber.
- Vidimos to add spray nozzles and redesign the OFCA ISVE system scrubber.

Signature: Leigh Peters Date: April 8, 2003

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WEEKLY CONSTRUCTION MEETING MINUTES
FOR APRIL 3, 2003 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 3, 2003

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES:
Tom Tinics – MWH
Todd Lewis – MWH
Robert Adams – MWH
Peter Vagt – MWH
Lee Orosz – MWH
Leigh Peters – BVSPC
Chris Daly – MWH (via phone)
Chad Smith – MWH (via phone)
Jon Pohl – MWH (via phone)

TOPICS:

Health and Safety Summary

There were no health and safety incidents at the ACS Site since the last weekly meeting on March 27th. Three contractors were on site this week – Independent Environmental, Ryan Construction, and US Floor. Prior to beginning work, Lee Orosz conducted a health and safety meeting with US Floor to advise of Health and Safety procedures to be followed at the GWTP and within the ACS facility.

Tom Tinics warned that there is a pan containing a hydrochloric acid solution located in the GWTP. The solution is being used to wash parts. The pan area is cordoned off and should be left alone.

Groundwater Treatment Plant (GWTP) Status

The GWTP was shut down on April 3 to allow US Floor to safely work around the catalytic oxidizer. US Floor is applying a protective coating to the concrete pad around the catalytic and thermal oxidizers. The system will be restarted once the work has been completed.

Prior to the interruption, the extraction rate from the combined PGCS and BWES (On-Site and Off-Site Areas) was 20-25 gallons per minute (gpm).

Groundwater level gauging in the On-Site Area indicates dewatering has lowered the water level inside the barrier wall to below the target at some piezometers and other

piezometers are dry. Further gauging at ISVE wells around the On-Site Area will be scheduled for next week.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

MWH, with the assistance of Ryan Construction, inspected the scrubber unit and discovered the packing material had experienced a high temperature incursion and was melted. MWH has scheduled Ryan to remove the damaged packing and is evaluating potential solutions for system operation to continue. This may include operating without packing (similar to the operation of the catalytic oxidizer).

Once the system is restarted, operation will continue with the same set of ISVE wells until a steady state has been achieved. MWH will then change the well set to continue the system evaluation process.

On-Site Area ISVE System

MWH, with the assistance of Independent Environmental Services (IES), has completed approximately 80% of the backfilling around the ISVE wells. An additional load of clay was delivered to the site for this task. Compaction testing was performed on the clay. This testing initially indicated the compaction density was greater than the specified 95%; however, the moisture content was low. To remedy this, MWH has been adding water to the clay. MWH is wrapping the previously installed conveyance piping with geotextile fabric for protection from the coarse aggregate fill that will be placed over it. Concrete is being poured over piping and at flush-mount wells. MWH anticipates completion of the On-Site Area piping by next week.

Other activities:

- US Floors is applying a sealer coat to the concrete blower shed foundation on April 3.
- MWH will be observing an operational test of the new thermal oxidizer/scrubber at the fabrication plant in Milwaukee on April 7. MWH anticipates delivery of the thermal oxidizer/scrubber system to the ACS Site on April 22.
- Fliteway continues to fabricate the On-Site Area blower shed for delivery on or about April 27.
- Austgen Electric is performing miscellaneous tasks associated with the power and control of the ISVE system, including constructing the control panels and running power lines.

Groundwater Monitoring

MWH completed the March 2003 Groundwater Monitoring Event on March 28. All samples were received by the laboratory in satisfactory condition. Preliminary analytical results are expected in approximately two weeks.

Design Refinements

There were no design refinements this week.

Looking Ahead

Week of April 7, 2003	• GWTP operation • ISVE operation anticipated to resume mid-week following maintenance tasks • IES anticipated to complete work • Austgen will continue with power/control systems for ISVE system • PRP Group meeting on April 10
Week of April 14, 2003	• GWTP/ISVE operation • On-Site Area BWES Upgrade operation
Health and Safety Items to Monitor	Items include: • Non-permit confined space during scrubber maintenance • MWH preparing for large crane to be brought on site to place blower sheds and thermal oxidizer/scrubber system • Lockout/Tagout procedures to be followed for new installations performed by AustgenDuring concrete coating, thermal and catalytic oxidizer will be shut down

Next Weekly Construction Meetings

- Thursday, April 17, 2003
- The April 10, 2003 weekly meeting will be postponed or rescheduled due to an all-day client meeting at the Site.

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Weekly Oversight Summary Report No. 110
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 7, 2003.
BVSPC O/S Dates: April 8, 2003 (Ms. Peters).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	2	ONCA SBPA ISVE System Yard Piping Installation Contractor
Area Survey	2	Surveying Contractor
Ryan Construction	2	General Contractor
Vidimos	1	Metal Fabricator
US Floors	2	Flooring Contractor

Construction Activities

Major Activities:

- Independent Environmental Services continued to backfill, set forms, and pour concrete for the flushmount On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system dual phase extraction wells.
- Area Survey surveyed the location of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction wells.
- Ryan Construction reassembled the Off-Site Containment Area in-situ soil vapor extraction system scrubber.
- Vidimos retrofitted the Off-Site Containment Area in-situ soil vapor extraction system scrubber from a packed column unit to a cyclonic unit.
- US Floors completed installing the sealer coat on the new sump installed around the oxidizer units located at the groundwater treatment plant.
- Montgomery Watson Harza did not hold a weekly construction coordination meeting on April 10, 2003, because of limited site activities and a PRP group meeting was held at the site during the usual construction meeting.

Activities Performed:

Independent Environmental Services (IES) continued backfilling clay around the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) and vapor phase extraction wells. IES also continued to pour the concrete pads around the flushmount wells. Area Survey surveyed the elevations of the ONCA SBPA ISVE system wells in addition to other locations that required surveying.

Montgomery Watson Harza (MWH) reported that the ONCA SBPA ISVE system thermal oxidizer and scrubber units are scheduled to be delivered on April 15, 2003. MWH also reported that the ONCA SBPA ISVE system blower sheds are scheduled to be delivered on April 28, 2003. Austgen continued to perform tasks in preparation for the new equipment.

Ryan Construction reassembled the Off-Site Containment Area (OFCA) ISVE system scrubber after removing the damaged packing from the scrubber. On April 8, 2003, Black & Veatch Special Projects Corp. (BVSPC) observed Ryan Construction reconnecting the ducting from the thermal oxidizer to the scrubber unit without proper fall protection. BVSPC brought this to MWH's attention immediately. Ryan Construction immediately climbed down from the work location and put on a harness. Ryan Construction proceeded to tie off to one of the structural beams of the groundwater treatment plant (GWTP). MWH reported that it had discussed fall protection with Ryan Construction during the toolbox health and safety meeting on April 7, 2003. MWH proceeded to reiterate fall protection health and safety with Ryan Construction and reported that it would send a written warning to Ryan Construction should its employees not follow the proper fall protection health and safety requirements.

Vidimos installed 12 additional spray nozzles, a directional diffuser, and a manway into the scrubber. Vidimos retrofitted the scrubber unit so that it would operate as a cyclone/vortex system instead of a packed tower, similar to the catalytic oxidizer scrubber. MWH resumed operating the OFCA ISVE system on April 10, 2003, pulling vapors from the previous set of wells.

US Floors installed the sealer coat on the new sump for the oxidizer units located at the GWTP. MWH reported that the GWTP was operating at 25 gpm except when it was shut down for US Floors' work around the oxidizer units.

MWH did not hold a weekly construction coordination meeting because of limited site activities and a PRP group meeting was scheduled for the same day at the site.

Topics of Concern:

- MWH reported that there are two thin areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. In addition, based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received preliminary results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the

design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial Design. MWH reported that it will continue to evaluate the use of a GCL in the construction of the proposed final cover.

Upcoming Activities:

- IES to complete placing the geotextile over the ONCA SBPA interim cover.
- IES to complete backfilling around the ONCA SBPA ISVE system wells and installing concrete pads around flushmount wells.
- Midwest Environmental, Inc. to place the gravel over the ONCA SBPA interim cover
- Ryan Construction to assemble the ONCA SBPA ISVE system thermal oxidizer and scrubber scheduled to be delivered April 15, 2003.
- Fliteway to deliver the ONCA SBPA ISVE system blower shed during the week of April 28, 2003.

Signature: Leigh Peters Date: April 18, 2003

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Weekly Oversight Summary Report No. 111
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 14, 2003.
BVSPC O/S Dates: April 17, 2003 (Ms. Peters).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	3	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	3	ONCA SBPA ISVE System Yard Piping Installation Contractor
Ryan Construction	2	General Contractor

Construction Activities

Major Activities:

- Independent Environmental Services completed backfilling around the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system dual phase extraction wells and continued pouring the concrete pads for the flushmount wells.
- Ryan Construction began assembling the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system thermal oxidizer and scrubber system.
- Montgomery Watson Harza began operating a new set of soil vapor extraction wells from the Off-Site Containment Area in-situ soil vapor extraction system.
- Montgomery Watson Harza held the weekly construction coordination meeting on April 17, 2003.

Activities Performed:

Independent Environmental Services (IES) completed backfilling clay around the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) and vapor phase extraction wells. Montgomery Watson Harza (MWH) reported that Great Lakes Soil & Environmental Testing will test the compaction and moisture of the clay backfill at two additional locations next week. IES continued to pour the concrete pads around the flushmount wells. IES reported that it will leave approximately 10 wells for completion until after the gravel is placed over the ONCA SBPA in order to allow easier access to the wells without damaging the conveyance piping.

MWH reported that the ONCA SBPA ISVE system thermal oxidizer and scrubber units were delivered on April 15, 2003. Ryan Construction began installing the units. The system will operate under an induced

draft instead of a forced air system as is the case with OFCA ISVE system thermal oxidizer. In addition, the new scrubber is fabricated from fiberglass reinforced plastic instead of 316 stainless steel. MWH reported that it will test out the new system with vapors from the Off-Site Containment Area (OFCA) ISVE system. MWH also reported that the ONCA SBPA ISVE system blower sheds are scheduled to be delivered on April 28, 2003.

MWH reported that it completed the repairs to the OFCA ISVE system scrubber last week. MWH began operating the following seven wells: SVE-9, SVE-15, SVE-19, SVE-21, SVE-22, SVE-24, and SVE-39. MWH reported that it hopes to determine whether operating a smaller set of wells at a higher flow rate will demonstrate if a larger capacity blower will be needed for the OFCA ISVE system. MWH reported that if it observes that greater concentrations of VOCs are removed from the subsurface at a higher flow rate, then a larger blower may be needed in order to remove the VOCs more quickly. If MWH does not observe a significant increase in VOC concentrations, then the current capacity of the system may be sufficient.

MWH reported that the GWTP was operating at 20 gpm. MWH reported that it was operating only the ONCA SBPA ISVE system DPE wells located west of the road. MWH also reported that it anticipates installing check valves in air lines for the ONCA SBPA ISVE system DPE wells in order to keep the pumps pressurized when they are not in operation. MWH reported that it replaced the pump in MW-10C and that it is now working properly.

MWH held the weekly construction coordination meeting on April 17, 2003.

Topics of Concern:

- MWH reported that there are two thin areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. In addition, based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received preliminary results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial Design. MWH reported that it will continue to evaluate the use of a GCL in the construction of the proposed final cover.

Upcoming Activities:

- IES to complete placing the geotextile over the ONCA SBPA interim cover.
- IES to complete pouring the concrete pads for the flushmount wells.
- Midwest Environmental, Inc. to place the gravel over the ONCA SBPA interim cover
- Ryan Construction to complete assembling the ONCA SBPA ISVE system thermal oxidizer and scrubber.

- Fliteway to deliver the ONCA SBPA ISVE system blower shed during the week of April 28, 2003.

Signature: Leigh Peters Date: April 21, 2003

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WEEKLY CONSTRUCTION MEETING MINUTES FOR APRIL 17, 2003 MEETING AMERICAN CHEMICAL SERVICE, NPL SITE GRIFFITH, INDIANA

MEETING DATE: Thursday, April 17, 2003

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES:
Tom Tinics – MWH
Todd Lewis – MWH (via phone)
Kevin Adler – U.S. EPA
Robert Adams – MWH (via phone)
Lee Orosz – MWH
Leigh Peters – BVSPC
Chris Daly – MWH
Jon Pohl – MWH (via phone)

TOPICS:

Health and Safety Summary

There were no health and safety incidents at the ACS Site since the last weekly meeting on April 3. However, there was one "near miss" situation. Ryan Construction was performing a tank repair that required one of the crew to sit on a suspended pipe. The crewmember was not properly tied off during this activity. The work was stopped immediately. MWH pointed out the potentially dangerous situation and required Ryan to take appropriate action.

A crane was on-site to unload the new thermal oxidizer/scrubber unit. No incidents occurred during this activity. Todd Lewis, Lee Orosz, Tom Tinics, and Kevin Adler all recently attended their Eight-Hour OSHA refresher courses.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 20 gallons per minute (gpm). There have been no issues with the plant since the last meeting.

The pump for MW-10C was replaced on April 16 and is currently operating. In the Still Bottoms Pond Area (SBPA), all pumps west of the access road are currently in operation. Check valves for the SBPA dual phase wells have been delivered to the site and will be installed to improve performance.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Repairs to the Thermal Oxidizer Unit have been completed. The repairs included removing the packing which had degraded, removing the dispersion plate, installing a 30" manway to the scrubber, and installing multiple spray nozzles and a directional diffuser to convert the unit to a vortex type scrubber. The unit is currently maintaining correct temperature.

On-Site Area ISVE System

The new Thermal Oxidizer Unit for the On-Site Area was delivered during the week of April 14. Ryan Construction is working on assembling the unit. Assembly should be completed by April 25. Austgen Electric will then complete all electrical and control connections. The unit is anticipated to be ready for test-out within two or three weeks.

The blower shed delivery to the On-Site ISVE system has been delayed.

Independent Environmental Services (IES) completed placing and compacting clay around the ISVE wells in the SBPA on April 16. Great Lakes will be on-site next week to complete compaction testing. IES will be on-site pouring concrete for the manways for the flush mounted wells. It is estimated that IES will complete this task in two or three weeks.

Design Refinements

MWH will be submitting a final evaluation of utilizing a geosynthetic clay layer (GCL) in the SBPA as part of the final cover.

Looking Ahead

Week of April 21, 2003	• GWTP operation • ISVE operation • Ryan will be assembling the new Therm-Ox Unit • IES will be pouring concrete
Week of April 28, 2003	• GWTP/ISVE operation • Austgen will be installing electrical and control connections for the new Therm-Ox Unit • IES will be pouring concrete manways for flush mounted wells
Health and Safety Items to Monitor	Items include: • Another crane lift is scheduled to occur in the next few weeks • Potential electrocution hazards associated with the Austgen work • Fall protection for the Ryan work

Next Weekly Construction Meeting - Thursday, May 1, 2003

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Weekly Oversight Summary Report No. 112
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 21, 2003.
BVSPC O/S Dates: April 23 and 24, 2003 (Ms. Peters).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	2	ONCA SBPA ISVE System Yard Piping Installation Contractor
Ryan Construction	2	General Contractor
Austgen	3	Electrical Contractor
Great Lakes Soil & Environmental Testing	1	Clay Compaction Testing Contractor

Construction Activities

Major Activities:

- Independent Environmental Services installed check valves in the air supply lines to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Great Lakes Soil & Environmental Testing tested the compaction at four of the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system dual phase extraction wells.
- Ryan Construction continued to assemble the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system thermal oxidizer and scrubber system.
- Austgen began installing the programmable logic controller and electrical wiring for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system thermal oxidizer and scrubber.
- Montgomery Watson Harza held the weekly construction coordination meeting on April 24, 2003.

Activities Performed:

Independent Environmental Services (IES) installed check valves in the air supply lines to the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) wells. IES installed the valves in the lines in order to maintain a positive

pressure in the pumps when they are not operating. During installation activities, IES wore half-face respirators. IES also completed pouring the concrete pads at six of the DPE wells. IES reported that it would pour the concrete pads at 13 perimeter DPE wells after the gravel is placed over the area in order for the concrete truck to access the locations without damaging the pipe. MWH reported that Midwest Environmental, Inc. (MEI) is expected to begin placing the gravel on the ONCA SBPA cover area on April 30, 2003. MWH also reported that MEI will complete placing the geotextile over the ONCA SBPA clay cover. MWH reported that Austgen will install the power line to the ONCA SBPA ISVE system blower shed once the gravel has been placed.

Great Lakes Soil & Environmental Testing tested the compaction of the clay at four of the ONCA SBPA ISVE system DPE wells. Great Lakes Soil & Environmental Testing tested the compaction at 6-inch and 12-inch depths at each location. MWH reported that all of the locations met the 95% compaction requirement.

Ryan Construction continued to install the new thermal oxidizer and scrubber system for the ONCA SBPA ISVE system. Ryan Construction completed installing the ducting between the thermal oxidizer and scrubber system on April 23, 2003. Ryan Construction also installed a stainless steel platform for the scrubber blower and exhaust stack. Austgen began installing the programmable logic controller (PLC) for the new thermal oxidizer and scrubber. MWH reported that it anticipated that it would start the system in the beginning of May. MWH also reported that it would begin operating the system with vapors from the Off-Site Containment Area (OFCA) ISVE system.

MWH reported that the high pressure pump for the OFCA ISVE system flooded and malfunctioned on Tuesday, April 22, 2003. MWH replaced the pump on April 23, 2003, and resumed operating the system on April 24, 2003. MWH continued to operate the system with seven wells on-line.

MWH held the weekly construction coordination meeting on April 24, 2003.

Topics of Concern:

- MWH reported that there are two thin areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. In addition, based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received the results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial Design. MWH reported that it will continue to evaluate the use of a GCL in the construction of the proposed final cover.

Upcoming Activities:

- MEI to complete placing the geotextile over the ONCA SBPA interim cover and begin placing the gravel.
- IES to complete pouring the concrete pads for the flushmount wells and installing check valves in the air supply lines to the DPE wells.
- Austgen to complete installing the PLC for the new thermal oxidizer and scrubber.
- Ryan Construction to complete assembling the new thermal oxidizer and scrubber.
- Fliteway to deliver the ONCA SBPA ISVE system blower shed in early May.

Signature: Leigh Peters Date: April 28, 2003

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WEEKLY CONSTRUCTION MEETING MINUTES
FOR APRIL 24, 2003 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, April 24, 2003

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES:
Tom Tinics – MWH
Robert Adams – MWH
Lee Orosz – MWH
Chris Daly – MWH
Travis Klingforth – MWH (via phone)
Peter Vagt – MWH (via phone)
Leigh Peters – BVSPC

TOPICS:

Health and Safety Summary
There have been no health and safety incidents at the ACS Site since the last weekly meeting on April 17th.

Groundwater Treatment Plant (GWTP) Status
The GWTP is currently operating at 20 gallons per minute (gpm). There have been no issues with plant operation since the last meeting on April 17th.

In the Still Bottoms Pond Area (SBPA), all dual phase extraction (DPE) pumps west of the access road are currently in operation. Check valves were installed in all of the SBPA DPE wells west of the access road during the week of April 21st to improve performance. Check valves will be installed in the remaining SBPA DPE wells during the week of April 28th.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area
Additional maintenance was performed on the Thermal Oxidizer Unit (Unit 1, the original unit used in operation of the Off-Site Area ISVE system) during the week of April 21st. MWH expects it to be back in operation by April 25th.

On-Site Area ISVE System
The new Thermal Oxidizer Unit (Unit 2) for the On-Site Area was delivered on April 15th. Ryan Construction continues to assemble the unit inside the GWTP. Assembly should be completed by April 25th. Ryan Construction will be mounting the blower unit

and exhaust system on a small mezzanine level constructed next to the Thermal Oxidizer Unit 2.

Austgen Electric is currently installing electrical and control connections to the new Thermal Oxidizer Unit. The unit is anticipated to be ready for test-out within two or three weeks.

Blower shed delivery for the On-Site ISVE system has been delayed for several more weeks.

Great Lakes Soil and Environmental, Inc. is scheduled to complete compaction testing of clay replaced around the SBPA wells on April 24th. Independent Environmental Services (IES) poured concrete manways for seven of the 21 flush mounted DPE wells on April 23rd. IES will construct the remaining manways after the gravel component of the SBPA cover system is installed (see below).

Midwest Environmental Services (MEI) will be placing six to eight inches of compacted gravel across the entire SBPA cover area during the week of April 28th.

Austgen Electric will be installing power lines on the previously-installed power poles between the GWTP and the SBPA blower shed during the week of April 28th.

Off-Site Area Final Engineered Cover

Duneland Surveyors will be performing an additional survey of the Off-Site Area Final Cover during the week of April 28th for Environmental Contractors of Illinois (ECI). This will supplement data previously collected by Duneland for the as-built figures for the Final cover.

Design Refinements

There were no design refinements for discussion this week.

Looking Ahead

Week of April 28, 2003	• GWTP operation • Off-Site ISVE operation • Ryan will continue assembling the new Therm-Ox Unit • MEI will place remaining gravel on On-Site cover • IES will be pouring concrete manways for flush mounted wells and installing check valves for DPE wells • Austgen will be installing electrical and control connections for the new Therm-Ox Unit • Duneland will perform supplemental survey of the Off-Site Area
Week of May 5, 2003	• GWTP/Off-Site ISVE operation
Health and Safety Items to Monitor	Items include: • Another crane lift is scheduled to occur in the next few weeks for placement of the new blower shed • Potential electrocution hazards associated with the Austgen work • Heavy equipment hazards for placement of gravel across the SBPA • Fall protection for the Ryan and Austgen work

Next Weekly Construction Meeting - Thursday, May 1, 2003

TMK/RAA/PJV
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Weekly Oversight Summary Report No. 113
ACS Superfund Site WA57, 46526.238

Reporting Period: Week of April 28, 2003.
BVSPC O/S Dates: May 1, 2003 (Mr. Campbell).

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	5	Respondent's General Contractor
Indiana Department of Environmental Management	1	
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Independent Environmental Services	2	ONCA SBPA ISVE System Yard Piping Installation Contractor
Ryan Construction	3	General Contractor
Austgen	2	Electrical Contractor
Simalabs	1	GWTP Sampling Contractor

Construction Activities

Major Activities:

- Independent Environmental Services installed check valves in the air supply lines to the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system.
- Ryan Construction continued to assemble the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system thermal oxidizer and scrubber system.
- Austgen continued installing the programmable logic controller and electrical wiring for the On-Site Containment Area Still Bottoms Pond Area in-situ soil vapor extraction system thermal oxidizer and scrubber.
- Simalabs collected samples from the groundwater treatment plant for routine analysis.
- Montgomery Watson Harza held the weekly construction coordination meeting on May 1, 2003.

Activities Performed:

Independent Environmental Services (IES) installed check valves in the air supply lines to the On-Site Containment Area (ONCA) Still Bottoms Pond Area (SBPA) in-situ soil vapor extraction (ISVE) system dual phase extraction (DPE) wells. IES installed the valves in the lines in order to maintain a positive

pressure in the pumps when they are not operating. During installation activities, IES wore half-face respirators.

MWH reported that Midwest Environmental, Inc. (MEI) is expected to begin placing the gravel on the ONCA SBPA cover area on May 5, 2003. MWH also reported that MEI will complete placing the geotextile over the ONCA SBPA clay cover. MWH reported that Austgen will install the power line to the ONCA SBPA ISVE system blower shed once the gravel has been placed.

MWH reported that Austgen will be performing maintenance activities on the Off-Site Containment Area (OFCA) final cap. Maintenance activities will include filling ruts in the cover and cutting the vegetative cover.

Ryan Construction continued to install the new thermal oxidizer and scrubber system for the ONCA SBPA ISVE system. Ryan Construction successfully installed the blower on the elevated platform without incident. Ryan Construction also connected the natural gas and electricity for the thermal oxidizer. MWH reported that Ryan Construction should be finished with its work by May 2, 2003. Austgen continued to install the programmable logic controller (PLC) for the new thermal oxidizer and scrubber. MWH reported that Austgen should be finished with its work within 2 weeks. MWH also reported that it expects to begin operating the system with vapors from the OFCA ISVE system during the week of May 12, 2003.

MWH reported that the ONCA SBPA ISVE system blower shed are under construction and are expected to be delivered to the site mid-May.

MWH reported that it continued to operate the OFCA ISVE system, pulling vapors from seven wells at double the original planned flow rate. MWH also reported that it would schedule a shut down of the system in order to inspect the reconfigured scrubber. MWH anticipated that the system would be shut down for approximately one-half day.

MWH reported that the groundwater treatment plant (GWTP) operated at 20 gpm. Simalabs collected samples from the GWTP for routine analysis.

MWH held the weekly construction coordination meeting on May 1, 2003.

Topics of Concern:

- MWH reported that there are two thin areas of the ONCA SBPA interim cover where the thickness of the clay is less than the design thickness. In addition, based on Hard Hat Services, Inc.'s clay sample for the ONCA SBPA interim cover, the permeability of the clay does not meet the design requirements.

Concern Resolution:

- MWH reported that it received the results of the sampling performed on the clay from the ONCA SBPA interim cover. MWH reported that one of the samples met the design requirements; however, the second sample did not. MWH proposed to use a geosynthetic clay liner (GCL) in order to meet the permeability requirements of the Final Remedial

Design. MWH reported that it submit a memorandum to the Agency proposing a GCL to meet the infiltration requirements of the final design.

Upcoming Activities:

- MEI to complete placing the geotextile over the ONCA SBPA interim cover and begin placing the gravel.
- IES to complete pouring the concrete pads for the flushmount wells.
- Austgen to complete installing the PLC for the new thermal oxidizer and scrubber.
- Ryan Construction to complete assembling the new thermal oxidizer and scrubber.
- Fliteway to deliver the ONCA SBPA ISVE system blower shed in early May.

Signature: Larry Campbell Date: May 6, 2003

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WEEKLY CONSTRUCTION MEETING MINUTES
FOR MAY 1, 2003 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, May 1, 2003

MEETING TIME: 10:00 AM

MEETING LOCATION: ACS Site – Site Trailer

ATTENDEES:
Tom Tinics – MWH
Robert Adams – MWH
Lee Orosz – MWH
Chris Daly – MWH
Peter Vagt – MWH
Prabhakar Kasarabada – IDEM
Kevin Adler – U.S. EPA (via telephone)
Larry Campbell – BVSPC
Jon Pohl – MWH (via telephone)

TOPICS:

Health and Safety Summary

There have been no health and safety incidents at the ACS Site since the last weekly meeting on April 24th. Work has continued inside the GWTP. Independent Environmental Services (IES) has been installing check valves, a crane has been on-site performing lifts, and Austgen Equipment (Austgen) and Ryan Construction (Ryan) have been doing work on ladders assembling the new Thermal Oxidizer Unit. One ladder brought to the site by Austgen was judged to be unstable so MWH required that a different ladder be used.

Groundwater Treatment Plant (GWTP) Status

The GWTP is currently operating at 20 gallons per minute (gpm) pumping from the Off-Site Barrier Wall Extraction System (BWES) extraction trenches, the On-Site BWES extraction trenches, eight dual phase extraction wells in the Still Bottoms Pond Area (SBPA), and the Perimeter Groundwater Collection System (PGCS). There have been no problems with plant operation since the last meeting on April 24th. Some small maintenance has been done in the GWTP since the last meeting.

In-Situ Vapor Extraction (ISVE) System – Off-Site Area

Thermal Oxidizer Unit (Unit 1, the original unit used in operation of the Off-Site Area ISVE system) continues to operate well. Some of the piping and pumps on Unit 1 have been changed. MWH is anticipating shutting down the unit down within the next few days to inspect the unit. Currently, eight ISVE wells are online pulling double the normal

flowrate from each well. This is being done in an attempt to determine if more VOCs can be extracted in an attempt to optimize the system.

On-Site Area ISVE System

Ryan estimates they will complete the assembly of Thermal Oxidizer Unit (Unit 2) for the On-Site Area by May 2nd. Process piping has been configured so that Off-Site ISVE wells can be used to start the unit. Austgen continues to install the electrical and control connections and anticipates completion within two weeks. Global is tentatively scheduled to be on-site for training and start up of the unit on May 12th.

Blower shed construction is progressing but the delivery has been postponed.

Great Lakes Soil and Environmental, Inc. completed compaction testing of clay replaced around the SBPA wells on April 24th. All areas tested met the compaction requirement.

IES has 14 concrete manways to pour but this will not be done until the gravel layer is placed. Midwest Environmental, Inc. (MEI) is anticipated to start placing the gravel the week of May 5th.

Off-Site Area Landscaping

Austgen will repair the landscaping around extraction well EW-20C and the rutting caused by drilling activities earlier in the spring.

Design Refinements

The Technical Memorandum regarding the Geosynthetic Clay Liner Review for the Still Bottoms Pond Area Cover will be submitted to the Agencies the week of May 5th.

The ISVE system is being retrofitted so that the vapors collected from the Off-Site wells, the On-Site wells, and the aeration tank can be treated by either of the two Thermal Oxidizer Units. The piping that will allow for this crossover has been installed. The control logic programming is still being completed.

Looking Ahead

Week of May 5, 2003	• GWTP/BWES/PGCS operation • Off-Site ISVE operation • Ryan will continue assembling the new Therm-Ox Unit • MEI will place remaining gravel on On-Site cover • IES will be pouring concrete manways for flush mounted wells • Austgen will be installing electrical and control connections for the new Therm-Ox Unit
Week of May 12, 2003	• GWTP/BWES/PGCS operation • Off-Site ISVE operation
Health and Safety Items to Monitor	Items include: • Another crane lift is scheduled to occur in the next few weeks for placement of the new blower shed and placement of equipment at the GWTP • Potential electrical hazards associated with the Austgen work • Heavy equipment hazards for placement of gravel across the SBPA • Fall protection for the Ryan and Austgen work

Next Weekly Construction Meeting - Thursday, May 8, 2003

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0740 Arrive on-site, Partly Cloudy, 45-50°F, N wind
Personnel Present:
* Lee Orosz MWH
Mike Petrich IES
Lane DeBartolo IES
Terrence Jones IES
Darryl Henry IES
* Todd Lewis MWH
* Leigh Peters BVSPC
Activities today:
① IES working on ONCA SBB+ SVE yard piping
② USFloors to install sealant on blower shed slab.
Observed that the OFCA SVE system down, portion of scrubber disassembled.

0750 Roll 39 Photo 1 facing S looking up at packing tray in scrubber, and melted plastic packing present.
MWH discussing making scrubber a cyclone type equipment by adding spray bars and removing packing completely. MWH to continue to evaluate.

0800 Roll 39 Photo 2 facing N showing melted packing. Note - original packing form still present in one portion - can observed

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significant deterioration MWH also reported that the upper spray bars were clogged. Ryan to be on-site today to continue cleanup and begin reassembly. Ryan cut manway into scrubber sump.

0810 Went to ONCA to observe IES. IES backfilling around wells, poured concrete for procaps for flushmount vapor wells and air sparge points located in the road. IES reported that testing of clay backfill was conducted yesterday at several locations and meet requirements. IES also reported that the excess native material placed at several DPE well locations is compacted prior to placing the 12-inches of clay. IES also reported wells + saddles backfilled with bentonite and covered with piece of geotextile fabric prior to backfilling.

0830 Roll 39 Photo 3 facing N showing IES wetting clay at SVE-58 Note geotextile around well.

0835 Spoke with T. Tinics, he reported IES required to meet compaction, but MWH more flexible on moisture requirement provided compaction is met. T. Tinics reported that they spoke with Rob Adams yesterday regarding requirements. Construction drawings required compaction to

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95% (106.4 pcf) and moisture -1% to +2% optimum (14-17%). T. Tinics reported one moisture sample -2% of optimum but compaction met. IES replacing clay in 2+ lifts.

0915 Roll 39 Photo 4 facing W showing IES wetting and compacting 2nd lift at SVE-5B.

0925 Continued to observe IES backfilling and compacting clay in several lifts at SVE 5B. Also observed USFloors acid-etching and prepping concrete at blower shed slab for floor sealant + coating.

1000 Weekly Construction meeting.

Attendees - * on previous plus:

Peter Vagt MWH Tom Tinico MWH

Rob Adams MWH

via phone:

Chris Daly MWH Jon Pohl MWH

Chad Smith MWH

H+S: no issues. MWH provided H+S orientation for USFloors

GWTP: at 20 gpm earlier this week, GWTP down today for USFloors to apply seal coat. GWTP to restart tomorrow at 25 gpm. MWH reported that it was close to meeting

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4/2/03

target dewatering in ONCA - to confirm by measuring SVE wells next week.

OFCA: Ryan disassembled yesterday, packing melted, MWH investigating reconfiguring to vortex scrubber, without packing.

ONCA: IES less than 1 wk of work, backfilling and meeting 95% compaction, visual inspection of moisture. Area to survey wells. MWH decided no need to survey or GPS piping. Clay cover design refinement - higher permeability + GCL does not meet design breakthrough time - but MWH evaluating entire cap as average for dewatering ~~[illegible]~~ TP activities. MWH evaluating construction of cap w/ GCL - asphalt placement onto p ok.

GW Sampling: Complete last friday ok. Results to be in 2 weeks.

Look Ahead: IES to finish next week, Ryan to repair thermox. ONCA thermox 4/15, ONCA blower shed 4/22.

H+S: Crane, lockout of electrical w/ Austgen work. Ryan - ~~IES~~ TP in ~~pre~~ TP non permit required confined space

1040 Mtg concluded

1100-1125 Spoke with L. Campbell on-site activities

1145-1230 Left site for lunch

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1230 - 1330 Completed Wkly + Monthly reports for Mar 03

1335 Observed USFloors putting primer coat on concrete pad at GWTP. USFloors reported it is putting on a 2-stage or second coat on sump pad + will return Fri or Monday to complete - weather pending.

1345 Went to ONCA, IES continuing to backfill. MWH reported that it is requiring 4 test locations for the backfill around all of the wells. Also MWH testing compaction at DPE wells only. MWH expressed concern over dislodging bentonite from saddle if IES compacts at vapor wells vigorously.

1350 Roll 39 Photo 5 facing NW of completed sealant on ONCA SBPA ISVE blower shed slab.

1400-1500 Revised MWH Sept 2002 GN report

1500 Went to ONCA with Ken Field of MEI. IES completed work for day. Ken expected 7-10 days of work involved in spreading gravel

1515 USFloors still popping concrete sump. Vidimos on-site inspecting OFCA ISVE scrubber.

1520 Left site for day

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0740: Arrive on-site; Overcast, 30-35°F, NE wind.

Personnel Onsite:

Lee Orosz	MWH	Tom Tinics	MWH
Tom Evers	Ryan		
Jerry Clark	Ryan		
Mike Petrich	IES		
Lane DeBartolo	IES		
Lonny Allen	Austgen		
Leigh Peters	BVSPC		

Spoke with T. Tinics, he reported Ryan finishing piping. Vidimos to be onsite, however Vidimos did not receive Hastelloy until this week and is still fabricating parts. Area Survey out yesterday. IES working on ONCA.

0750 Went to observe Ryan's work - J. Clark sitting on top of ductwork connecting ducting - mentioned to L. Orosz - J. Clark not tied off - ladder not in vicinity - limited access. L. Orosz asked how J. Clark got on top of ducting - he pointed to ladder east of ~~road~~ ~~of~~ his location and wall I-beam

0755 Roll 39 Photo 6 facing S of J. Clark sitting on ducting - not tied off.

J. Clark immediately got down from ducting after photo and stated that he would at work there

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without being tied off - J. Clark put on harness and tied off to I-beam

0800 Roll 39 Photo 7 facing S showing J. Clark of Ryan with harness and tied off.

0810 Went to ONCA - IES placing concrete forms around air sparger location

0815 Roll 39 Photo 8 facing NE showing IES setting form and checking that it is level and 18-inches above the top of the clay layer

0824 Spoke with L. Orosz - he reported that T. Tinics specifically reviewed being tied off with Ryan construction during the HTS mtg yesterday. Mr Orosz also reported that T. Tinics went to Ryan currently to review the HTS and protocol for tying off. L. Orosz also reported J Clark tied off currently and should have had not been tied off. L. Orosz stated that he wanted to explain that MWH had specifically discussed tying off with Ryan.

0920 Returned to GWTP to observe Ryan's work on scrubber. Ryan using manlift and is tied off.

0930 - 10:00 Worked on Weekly Report for 3/31/03

1005 Returned to ONCA and observed IES

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4/8/03 [signature]

continuing to set forms for concrete pads. IES reported that it did not expect to pour ~~concrete~~ pp concrete today. To continue forms and set rebar

1030 Returned to GWTP - US Floors still to place sealcoat on exterior sump, Ryan Construction installing piping. T. Tinics reported Yudimos to install 3 sets of 4 nozzles onto scrubber to induce vortex inside. MWH also reported that it will reconfigure piping once new ONCA thermox system is installed & running. New thermox tested at manufacturers yesterday successfully. Scheduled to be delivered next week. Activities this week are IES and Yudimos - Not much else scheduled. MWH has 8-hr refresher Monday - may not have site activities on April 14.

1120 Left site for day.

[signature] 4/8/03

4/17/03 Leigh E Peters

0810 Arrive on-site, cloudy, light rain, NE wind, 45°F
Personnel Present:

* Lee Orosz	MWH
Mike Petrich	IES
Lane DeBartolo	IES
Jerry Clark	Ryan
Tom Evers	Ryan
* Chris Daly	MWH
* Tom Tinics	MWH
* Leigh Peters	BVSPC

Activities today

1. IES working on ONCA SBPA ISVE piping + backfill completion
2. Ryan assembling new thermox/scrubber
3. Weekly Construction meeting.

Spoke with C. Daly. He reported submittals for new thermox/scrubber should be complete and forwarded next week. C. Daly observed test-out on 4/7/03 but not sure when start up to take place on-site.

0825 Roll 39 Photo 9 facing S of OFCA ISVE scrubber with new manway, and reconfigured spray bars.

0830 Spoke with T. Tinics about retrofit on OFCA scrubber. He reported it is working well and

Leigh E Peters

Leigh E Peters

4/17/03

That a vortex of water inside unit was achieved. Vidamos to return to repair a couple of Hastelloy welds that are leaking. C. Daly to switch to a newset of OFCA ISVE wells today to reduce wells to 8-9 wells and pull greater flow from each. This will enable MWH to monitor concentrations to determine whether a second blower would improve system. If concentrations don't increase significantly, then increasing flow rate may not improve removal rate of constituents.

0845 Went to ONCA. IES complete with backfill — working on final concrete pads around flushmount wells. Earlier, L. Orosz reported Great Lakes to test compaction at 2 final DPE wells. Observed IES preparing SVE-84 for concrete by placing precap and rebar. IES reported that it was likely to wait on pouring concrete for perimeter DPE wells until gravel is placed for better access with equipment.

0900 Roll 39 Photo 10 facing SW of IES installing rebar for concrete pad at SVE-84.

0920 IES reported that it will not pour concrete today.

0925 Went to OFCA blowershed w/ T. Tinics + C Daly to observe them inspect new level controller for knockout tank. Ryan Construction needs to

Leigh E Peters

4/17/03 [signature]

fabricate addition to tank for switch - MWH to run system with ambient air to eliminate vapors in air stream + knockout tank before work

1000 Weekly Construction Meeting

Attendees - * on previous plus

Via phone:

Kevin Adler EPA Todd Lewis MWH

Rob Adams MWH Jon Pohl MWH

HTS: No incidents - Minor issue with Ryan not being tied off for work on OFCA ISVE scrubber. MWH discussed + reiterated that MWH will issue written warning to Ryan's management.

GWTP: Running at 20 gpm. MWH replaced pump in MW10C. All DPE wells are on west of roadway - pumps operating ok. MWH to ~~check~~ JP install check valves in pumps next week.

OFCA ISVE: unit retrofitted w/o packing, 12 new spray bars to make cyclone unit - operating ok. Temperatures in check with proper operation. MWH investigating treatment process to minimize hardness in GWTP effluent that is used for blowdown.

ONCA ISVE: thermox + scrubber placed, will be assembled next week. MWH to pipe

[signature]

4/17/03 [signature]

OFCA vapor to ONCA thermox to prove it out. Blower shed delivery delayed.

ONCA SBPA: IES completed backfill, will pour concrete pads - 10 will remain for completion after rock is placed. Rock may be placed April 28, 2003. Great Lakes to test compaction at 2 DPE wells next week.

Design Refinements: MWH continuing to evaluate Bentomat for ONCA.

Look Ahead: OFCA ISVE op, GWTP op, IES to finish concrete, Austgen + Ryan finish ONCA ISVE system work.

Next scheduled meeting - April 24, 2003

1045 Mtg conclude. MWH reported US Floors completed sealant last friday. Wrote up minutes for meeting

1130-1200 Left site for lunch

1215 Went to GWTP Observed Ryan Construction assembling ONCA Thermox/Scrubber units.

1225 Roll 39 Photo 11 facing SE of new scrubber for ONCA - tower made of FRP.

1230 Roll 39 Photo 12 facing SE of Hastelloy duct from thermox outside into scrubber unit - Note - 4 total primary quench locations.

1315-1330 Spoke with Larry Campbell on site activities.

(42)

4/17/03 [signature]

1340 Went to OFCA to observe MWH switch wells. MWH pulling from wells SVE-1, 2, 14, 15, 18, 19, 22 and SVE-24.

1355 Roll 39 Photo 13 facing NW of MWH measuring flow at SVE 18 - Note product. MWH observing water in several wells SVE-18 and SVE-14 - switching which wells to operate. Seven final wells - SVE-9, 15, 19, 21, 24, 22, 39. ONEK-P wells on-line - MWH operating those from which they can establish flow. Total flow from SVE wells - 3.4-3.6 in H_2O.

1415 Roll 39 Photo 14 facing N of monitoring vapors with FID from SVE well. Note - pump needed since vapors under vacuum.

1420 C. Daly reported MWH to address air sparge points after 1st yr of operation. If MWH determines larger blower needed, it may need additional treatment equipment depending on ONCA SBPA ISVE operation capacity required.

1430 Roll 39 Photo 15 facing NE of New thermox unit at GWTP.

1435 Continued to observe Ryan Construction install piping for new scrubber. Platform for blower to be delivered monday.

1510 Ryan packing up for day. Left site for day

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4/23/03 [signature]

0750 Arrive on-site, Sunny, North-west wind, 40-45°F

Personnel Present:

Lee Orosz	MWH
Lane DeBartolo	IES
Mike Patrick	IES
Chris Daly	MWH
Jerry Clark	Ryan
Leigh Peters	BVSPC

Activities Today:

1. Ryan continue ONCA thermox/scrubber assembly.
2. IES pour concrete for flushmount wells on ONCA and install check valves for DPE wells.

Went to GWTP + observed progress on ONCA Thermox. J. Clark reported that the crossover ducting is off by ~4 inches - thermox may need to be moved

0800 Roll 39 Photo 16 facing S of platform for blower and crossover ducting for ONCA scrubber

0805 Roll 39 Photo 17 facing SE of ducting out of Thermox and misalignment of connection to scrubber.

0810 Went to OFCA + observed IES pouring concrete pads at DPE - flushmount wells.

0820 Roll 39 Photo 18 facing WSW of IES pouring concrete at DPE well.

[signature]

4/23/03 [signature]

0845 Roll 39 Photo 19 facing SW at IES finishing the concrete pad at a flushmount DPE well.

0900 Spoke with R. Stern who is taking water level measurements. He reported water level in ONCA near target level. He also reported that the damaged piezometer in ONCA to be resurveyed today.

0910 Spoke with T. Tinies - he reported high pressure pump blew out the threads on the piping yesterday and flooded. MWH blowing fuses when trying to operate. Anstgen to be onsite today to inspect.

0945 Returned to ONCA - observed IES finishing concrete pads.

1015 Roll 39 Photo 20 facing S showing IES installing check valve on air line to pump at DPE well SVE-79. IES wearing half mask respirator during activities.

1105 - 1120 Spoke with L. Campbell on site activities.

1125 Observed MWH collecting water level data on ONCA.

1150 - 1230 Left site for lunch - Returned & worked on reports in trailer

1250 Spoke w/ T. Tinies, Ryan to stabilize platform expect startup in 2 weeks. MWH ordered

4/28/03 [signature]

new pump for DFCA thermox/scrubber. IES stopped work for day. I worked on reports at trailer

1440 Went to GWTP to check on Ryan's work. Thermoxidizer unit moved east and connection to ducting to scrubber assembled. T. Tinies reported that the motor is ruined in the high pressure pump for the DFCA ISVE scrubber.

1510 Roll 39 Photo 21 facing SW at Ryan retrofitting blower so that the pulleys can be accessed.

1520 Left site for day

[signature] 4/28/03

4/29/03 [signature]

0730 Arrive on-site, sunny, haze, 45°F, E wind.
Personnel Present:
* Lee Orosz MWH
Tom Evers Ryan
Terry Fiske Ryan
Jerry Clark Ryan
Lonny Alger Austgen
Joe Mannion Austgen
Joe Royko Austgen
* Leigh Peters BVSPC
Activities today
1. Ryan + Austgen working on new thermox and scrubber
2. Weekly Construction Meeting.

0735 Observed Ryan Construction installing piping for OFCA/ONCA ISVE influent at GWTP to the glinch header. Valves installed between the 2 header pipes to switch between the old and new oxidizers. Austgen running electrical conduit from new thermox to GWTP control room

0900 MWH reported that Great Lakes to be on-site to test compaction at DPE well backfill. MWH also reported that MEI will complete placing geotextile over the ONCA SDPA

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4/29/03 [signature]

interim cover prior to placing gravel.

0910 Shealabs on-site for weekly GWTP sampling

0930 Great Lakes on-site for compaction testing.

0940 Went to ONCA to observe compaction testing. First samples collected near SVE-46. Proctor density at 112 pcf - MWH requiring 95% compaction. Samples to be collected from 6 inch and 12 inch depth. 1st test - density 110 pcf Moisture 14% at 6 inch depth. Test 2 compaction = 111 pcf (99%) Moisture = 13.9% AT 12 inches.

2nd location SVE-50 Depth

Test 3: Compaction: 109.9 Moisture: 12.7% - 12 inch

Test 4: compaction: 112.1 Moisture: 12.2% 6 inch

Spoke with J. Pohl regarding erosion in comp. he reported that it should not be a problem but that he will look into it

1000 Weekly Construction Meeting.
Attendees - * as previous plus
Tom Timics MWH Chris Daly MWH
Rob Adams MWH
Via phone:
Peter Vagt MWH T. Klingforth MWH
H+S: No incidents, work in GWTP and IES on-site

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4/24/03 [signature]

GWTP: op at 20gpm. IES installed air check valves in DPE wells west of road - to complete next week.

Thermox 1: in hot idle - MWH to replace high pressure pump today - system to restart tomorrow. Ryan completing piping.

Thermox 2: Ryan completing installation blower and stack to be raised on platform tomorrow. Austgen installing PLC - Logic is completed. No update on delivery date for blower shed.

ONCA: MEI to start placing rock next week. IES to be onsite next week to finish air valves and pull forms. Great Lakes to complete compaction today

Look Ahead: GWTP, OFCA ISVE operation MEI to place stone, Austgen to run cable.

Design refinements - None

~~1030~~ 1030 Mtg conclude - Next meeting 5/1 @ 10AM

1035 J Pohl reported that he tested 4 locations for compaction on ONCA. All locations were a minimum of 98% compaction.

1100 Roll 39 Photo 22 facing NE of Ryan working on vapor lines + piping

1125 Left site for day

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5-1-03 [signature] (49)

0900 Arrive Onsite - overcast, 45°F calm - rain last night

Personnel onsite

Lee Orosz MWH Pete Vagt MWH
Lonny Alger Austgen Rob Adams MWH
Tom Evers Ryan
Jerry Clark Ryan
Joe Rogko Austgen
Terry Frisk Ryan
Tom Times MWH Chris Day MWH
Mike Chenoweth Semilabs
Larry Campbell BUSPC

0910 Inspect const of thermox in GWTP

0915 Inspect ONCA - Minimal activity IES adding check valves in air lines for Dual Phase wells

0920 Roll 39 Photo 23 facing ~~NW~~ NE of IES installing check valve in air line of DPW SVE049

0930 Roll 39 Photo 24 Facing NW of IES installing check valve in air line of DPW SVE048. Note LNAPL product (black) on air line hose.

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5/1/03 J M Campbell

1010 Construction Mtg

Attendees:

Pete Vogt MWH, Tom Tonics MWH

Rob Adams MWH, Chris Daly MWH

Lee Orsez MWH,

Prabhakar Kasarabada – IDEM

Larry Campbell BVSPC

Kevin Adler EPA } via phone

John Pohl MWH }

H&S – No incidents since last week but v. limited work outside GWTP & crane lifts – ok. Removed OSHA-Approved Wooden ladder

GWTP – 20 gpm from all available sources

Thermox 1 (OFCA) – Running well changed out piping & pump. Plan to shut down for ½ dy to check internals. Plant controls working better. Now using 2nd set of 8 Wells – thinking doubling flow through these SVE well to see if can increase volatiles captured.

Thermox 2 (ONCA) – Ryan assembling scrubber + oxidizer w/ Natural gas

J M Campbell

5/1/03 J M Campbell

and electricity. Will transfer OFCA gases to Thermox 2 to check out operation of Thermox 2. Austgen to complete electrical w/i 2 weeks. Ryan s/b complete this week. Gibbs Engineering scheduled (+) to be on site 5/12 to start unit and train MWH personnel.

ONCA Blower Shed – Under construction @ plant. Hope for mid May delivery

ONCA piping – IES to pour remaining concrete pads at various locations – after gravel has been placed to allow access over piping. MEI to place gravel tomorrow or Sunday.

OFCA Maint – Awarded contract to fill ruts in OFCA, & cut grass – Award to Austgen Equip. Co.

Design Refinements – None

MWH is planning to submit memo to Agencies & BVSPC next week showing MWH plans to install GCL & place gravel to meet infiltration limits

J M Campbell

(52)

5-1-03

MWH is modifying SVE piping to GWTP so gasses from OFCA, ONCA & Plant off Gas system can be ~~[illegible]~~ processed at either of Cat ox, thermox1 or thermox2.

Look Ahead

Ryan to complete thermox2 mechanical

Austgen " " " " Electrical

IES to place conc. pads

MEI to ~~[illegible]~~ place gravel ONCA

Austgen Equip - OFCA Cover Maint

Global her for tring & starting of Thermox 2

1030 Meeting Over

1040 Inspect const of thermox2

1045 Roll 39 Photo 25 - looking NE at Ryan personnel installing piping outside GWTP for thermox 2

1130 Leave site for Lunch

1230 Return

Make final review of GWTP

1330 @ left site

Jim Campbell

(53)

Jim Campbell

5-6-03

0900 Arrive Onsite - weather clear sunny, 60°F

Personnel Onsite

Lee Orosz MWH

Bill Shelbert GE Marshall

Ken Field MEI

Ron Gentry "

Tom Evers Ryan

Jerry Clark "

Dwayne Austgen Austgen Elec

Lonny Acker "

Jon Kozy "

Tim Kirkland Austgen Fleet

Terry Frisk Ryan

Mike Larson Austgen

Larry Campbell BVSPC

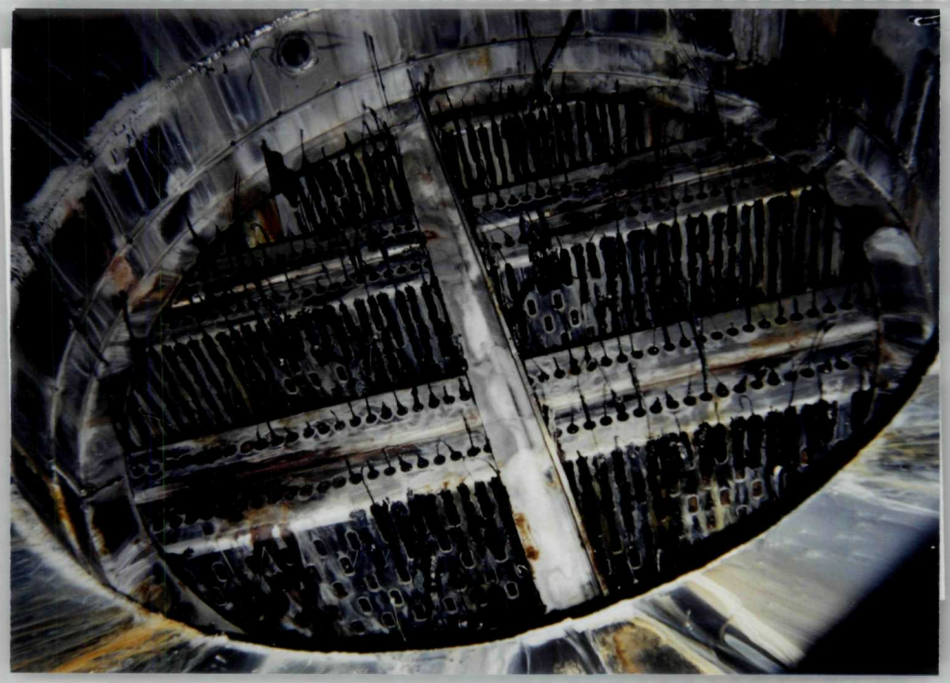
0925 Go to ONCA

Roll 39 Photo 26 Looking SSW at truck dumping gravel W of blower shed Pad

0935 Roll 39 Photo 27 Looking NW at MEI laying geofabric around ISVE well SVE 58

0945 Roll 40 Photo 1 Looking NW at MEI placing geo fabric

Jim Campbell



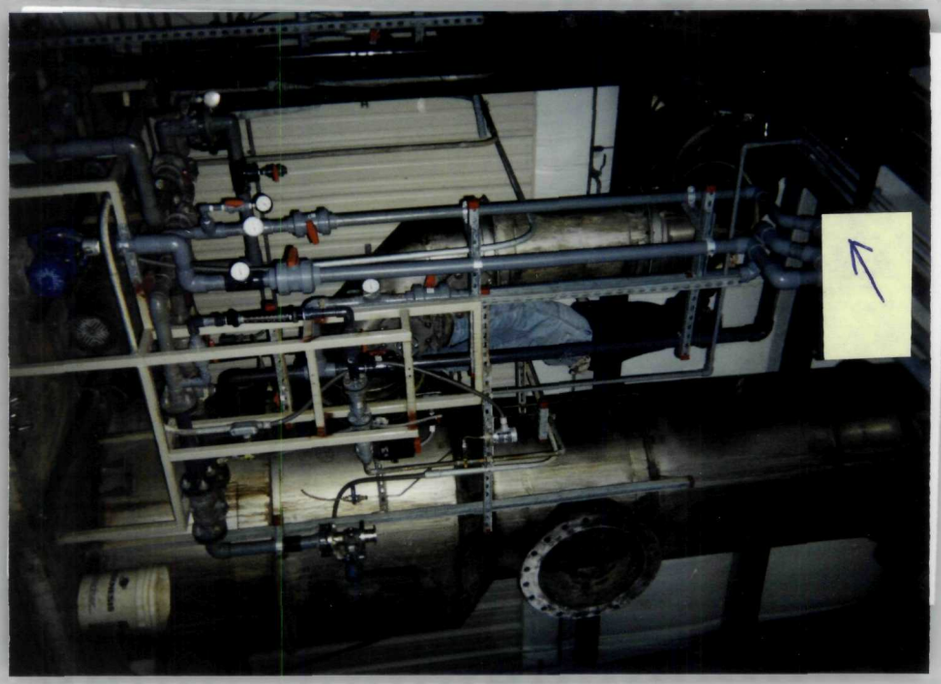
Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #1
Date: 04-03-03 Time: 07:50
Photographer: Leigh Peters
Description: Photo facing south showing the packing tray in the OFCA ISVE system scrubber and the melted plastic packing.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #2
Date: 04-03-03 Time: 08:00
Photographer: Leigh Peters
Description: Photo facing north showing the melted packing from the OFCA ISVE system scrubber. Note that some of the original form of the packing can be observed.

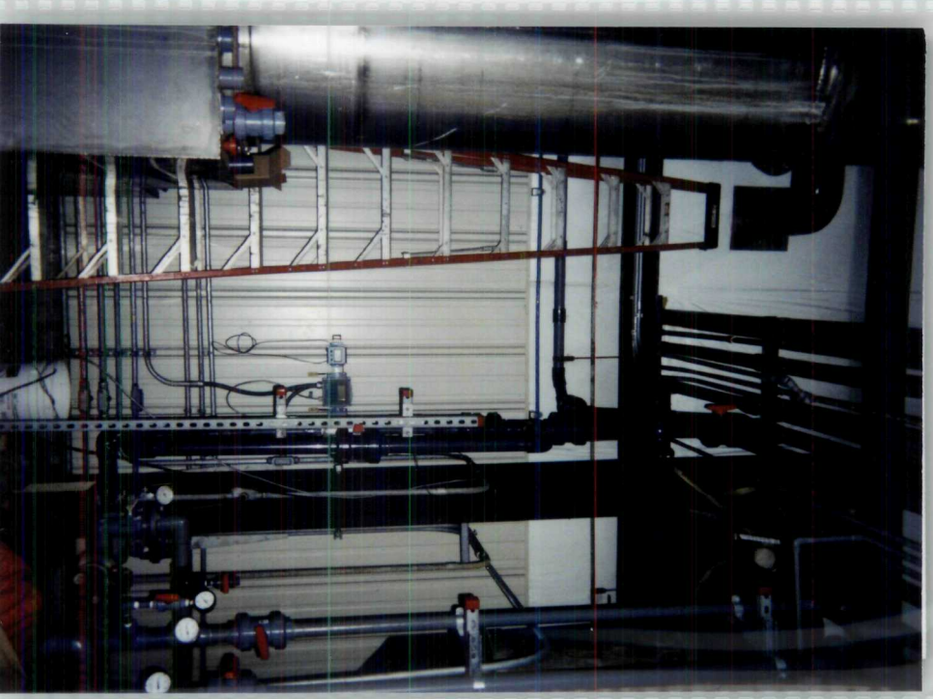
Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #3
Date: 04-03-03 Time: 08:30
Photographer: Leigh Peters
Description: Photo facing north showing IES wetting the clay at ONCA SBPA ISVE system well SVE-58 during backfilling activities.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #4
Date: 04-03-03 Time: 09:15
Photographer: Leigh Peters
Description: Photo facing west showing IES wetting and compacting the second lift of clay at ONCA SBPA ISVE system well SVE-58.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #5
Date: 04-03-03 Time: 13:50
Photographer: Leigh Peters
Description: Photo facing northwest showing the completed sealer coating applied to the ONCA SBPA ISVE system blower shed slab.



Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #6
Date: 04-08-03 Time: 07:55
Photographer: Leigh Peters
Description: Photo facing south showing a Ryan Construction employee sitting on the OFCA ISVE system ducting without proper fall protection.

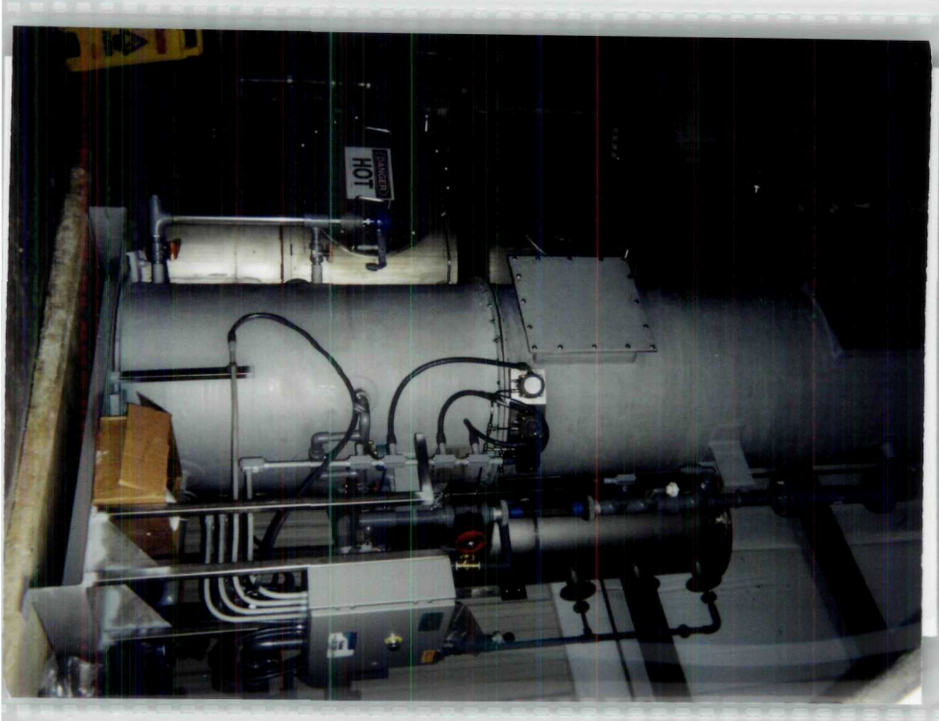


Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #7
Date: 04-08-03 Time: 08:00
Photographer: Leigh Peters
Description: Photo facing south showing the Ryan Construction employee working above the OFCA ISVE system ducting with a harness.

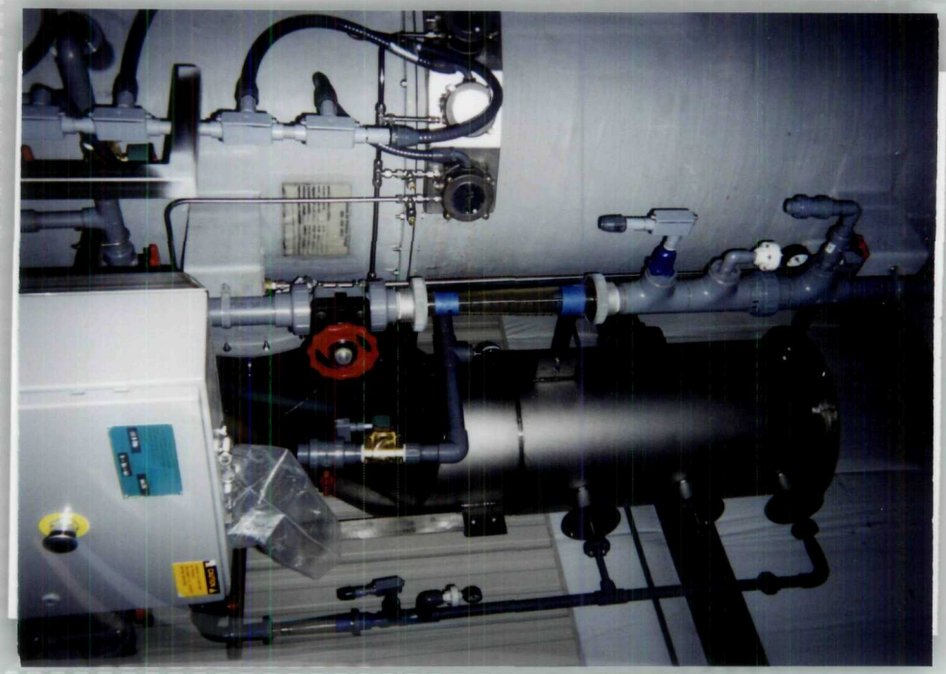
Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #8
Date: 04-08-03 Time: 08:15
Photographer: Leigh Peters
Description: Photo facing northeast showing IES setting the form for the concrete pad at ONCA SBPA ISVE system air sparge point AS-2.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #9
Date: 04-17-03 Time: 08:25
Photographer: Leigh Peters
Description: Photo facing south showing the OFCA ISVE system scrubber with a new manway and reconfigured spray bars.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #10
Date: 04-17-03 Time: 09:00
Photographer: Leigh Peters
Description: Photo facing southwest showing IES installing the rebar for the concrete pad a flushmount ONCA SBPA ISVE system well SVE-84.



Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #11
Date: 04-17-03 Time: 12:25
Photographer: Leigh Peters
Description: Photo facing southeast showing the new ONCA SBPA ISVE system scrubber made from fiberglass reinforced plastic.



Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #12
Date: 04-17-03 Time: 12:30
Photographer: Leigh Peters
Description: Photo facing southeast showing the Hastelloy duct from the new thermal oxidizer unit to the scrubber located inside the GWTP.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #13
Date: 04-17-03 Time: 13:35
Photographer: Leigh Peters
Description: Photo facing northwest showing MWH measuring the flow from OFCA ISVE system well SVE-18. Note the presence of a dark product in tubing.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #14
Date: 04-17-03 Time: 14:15
Photographer: Leigh Peters
Description: Photo facing north showing MWH monitoring vapors with the FID from a SVE well.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #15
Date: 04-17-03 Time: 14:30
Photographer: Leigh Peters
Description: Photo facing northeast showing the new thermal oxidizer unit installed at the GWTP.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #16
Date: 04-23-03 Time: 08:00
Photographer: Leigh Peters
Description: Photo facing south showing the platform installed in the GWTP for the blower unit for the new thermal oxidizer and scrubber units.

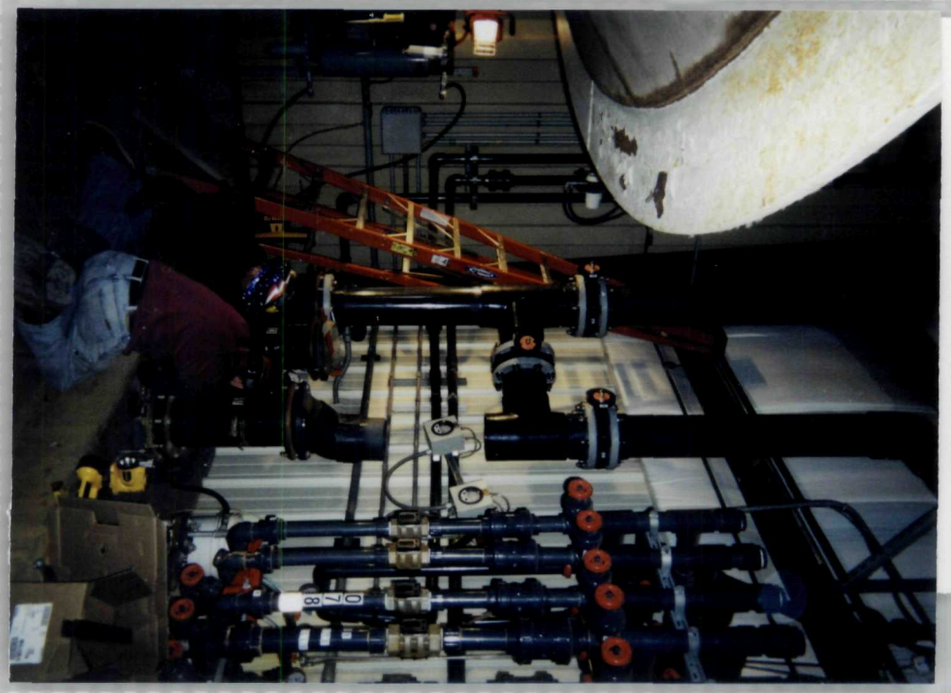
Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #17
Date: 04-23-03 Time: 08:05
Photographer: Leigh Peters
Description: Photo facing southeast showing the ducting out of the thermal oxidizer to be adjusted to connect to the ducting to the scrubber unit.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #18
Date: 04-23-03 Time: 08:20
Photographer: Leigh Peters
Description: Photo facing southwest showing IES pouring concrete for the concrete pad at an ONCA SBPA ISVE system DPE well.

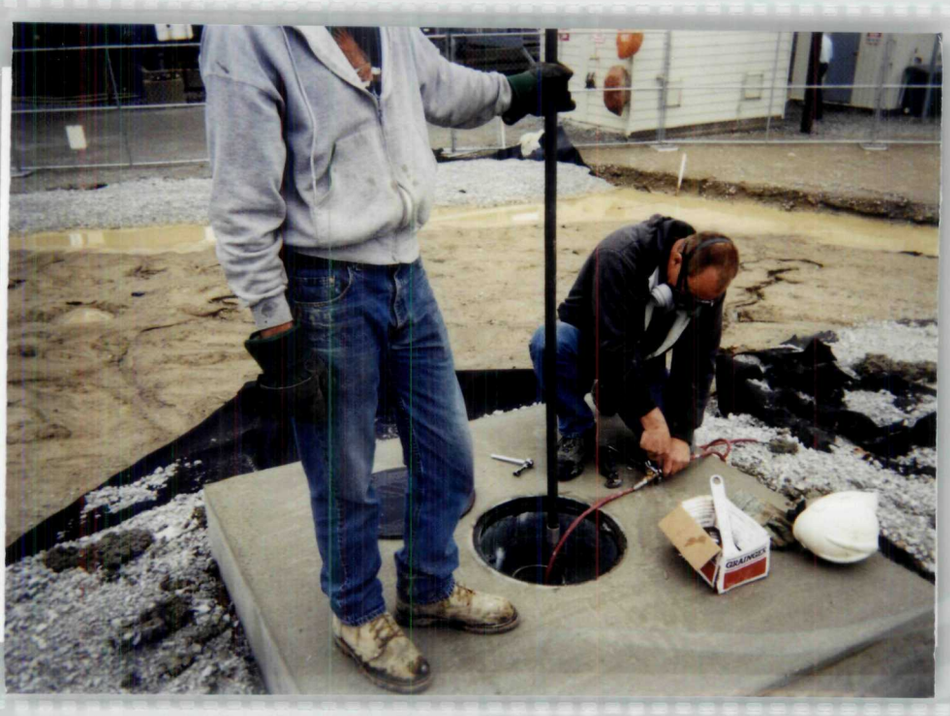
Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #19
Date: 04-23-03 Time: 08:45
Photographer: Leigh Peters
Description: Photo facing southwest showing IES finishing the concrete pad at an ONCA SBPA ISVE system flushmount DPE well.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #20
Date: 04-23-03 Time: 10:15
Photographer: Leigh Peters
Description: Photo facing south showing IES installing a check valve on the air supply line to the pump at ONCA SBPA ISVE system DPE well SVE-79.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #21
Date: 04-23-03 Time: 15:10
Photographer: Leigh Peters
Description: Photo facing southwest showing Ryan Construction retrofitting the blower for the new scrubber in order to allow access to the pulleys once it is installed.



Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #22
Date: 04-24-03 Time: 11:00
Photographer: Leigh Peters
Description: Photo facing northeast showing Ryan Construction installing the header system for the ISVE system vapors and thermal oxidizer units.



Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #23
Date: 05-01-03 Time: 09:20
Photographer: Larry Campbell
Description: Photo facing northeast showing IES (wearing half face respirators) installing the check valve in the air supply line to ONCA SBPA ISVE system DPE well SVE-49.

Site: American Chemical Services, Inc.
Proj. #: 46526
Roll: 39 Photo #24
Date: 05-01-03 Time: 09:30
Photographer: Larry Campbell
Description: Photo facing northwest showing IES installing a check valve in the air supply line to ONCA SBPA ISVE system well SVE-48. Note black LNAPL on red air line.

Site: American Chemical Services, Inc.
Proj. # 46526
Roll: 39 Photo #25
Date: 05-01-03 Time: 10:45
Photographer: Larry Campbell
Description: Photo facing northeast showing Ryan Construction installing piping outside the GWTP for the new thermal oxidizer unit.