City of Rochester

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Department of Environmental Services

Office of the Commissioner
City Hall, Room 300-B
30 Church Street
Rochester, New York 14614-1290

March 23, 1994

Todd Caffoe
New York State Department of Environmental Conservation
Region 8
6274 East Avon-Lima Road
Avon, New York 14414

Re: Court Street Parking Garage IRM

Dear Mr. Caffoe:

We have reviewed your March 21 comments and prepared this addendum letter for incorporation into the IRM Work Plan and the Site Health and Safety Plan. If the addendum is acceptable, please send us a brief letter indicating that the Department's concerns have been adequately addressed and also let us know where we should forward the consent order for DEC signature and execution.

We believe that our plan is a responsible approach to both addressing soil contamination and the health and safety of the future occupants and users of the garage and tunnel facilities. Thank you for your cooperation and timely comments during the preparation of the plans. Let me know if you have any questions.

Sincerely,

Mark D. Gregor
Environmental Specialist

attach.
xc M.J.Peachey
R.Elliott
D.Napier
E.Doherty
L.Kash
J.Brennan
A.Klumpp
T.Seeler

COURT STREET PARKING GARAGE IRM
ADDENDUM NO.1

Comment 1

Page 4-16, Please elaborate upon what criteria will be used to install additional sections to the ventilation system. As we discussed in our March 17, 1994 telephone conversation, the ventilation system should be expanded into areas where contaminated soils remain above the clean-up criteria. In order to actively remediate any remaining contaminated soils, the piping should be within the contaminated soils. The final configuration of the ventilation system must be presented in the IRM completion report.

Response:

The installation of additional sections of ventilation pipe will be based on the following criteria:

1. If stained soil and/or chemical compounds at concentrations greater than the Department's recommended cleanup values are found in areas adjacent to new facilities and existing below grade structures that cannot be removed, then additional sections of vent pipe will be installed. The Spill Technology And Remediation series Memo #1 entitled the Petroleum-Contaminated Soil Guidance Policy (STARS) or the Technical Administrative Guidance Memorandum entitled "Determination of Soil Clean-up Objectives and Clean-up Levels" dated 1992 will serve as the source of the clean-up values. The new facilities and existing structures criteria were used to establish the basic vent system design concept that was included in the IRM work plan.

2. In areas outside of those mentioned above, where chemical compounds are found at concentrations greater than established clean-up levels, additional vent pipe will be installed or the contaminated soil will be left in place and covered with a minimum two foot layer of clean shot-rock rubble. This layer of rock will extend from the contaminated zone to the nearest ventilation pipe. The shot rock will provide a zone of enhanced air permeability which should enable the ventilation system to entrain vapors escaping off the contaminated soil. The decision regarding which method to use will be made based on the best information avialable at the time regarding the need for additions to the particular vent-riser system that will be affected.

In areas where ventilation is required, the ventilation intake pipe will be placed in the center of the contaminated zone and covered with select clean, washed Number 1 stone as specified in our original submittal dated March 1994.

Comment 2.

The design of the gravel pack for the slotted ventilation pipes should include a filter fabric wrap to prevent fine grained material from clogging the screens and the gravel pack.

Response:

We do not believe that the placement of filter fabric is necessary around the gravel pack. This is in part because the naturally dense soil, if left in place, is sufficiently dense that fine particles will not leave the soil matrix. Also the relatively small amount of fines present in the backfill material selected for use is not sufficient to cause a significant loss of pore space in the gravel pack.

Number 1 stone will be used as backfill. The grain size distribution data is presented in attachment 1.

Comment 3.

Prior to installation of the ventilation pipes, it should be determined whether a blower can be adequately sized to extract soil vapor from the piping system. It may be necessary to modify the design of the piping system to account for pressure losses or "dead areas" within the ventilation system.

Response:

Unfortunately, the finalization of the ventilation system layout will not be completed until our excavation work is done. As indicated above the conditions encountered during and after excavation will drive the system requirements. This limits our response to your question concerning blower sizing. We will consult with you regarding ventilation system layout modifications and blower specifications if it appears one or more blowers will be needed. Your concern over the creation of dead zones is also a concern to us. We have attempted to add flexibility to the ventilation system concept design by including three separate vent sections each with its own riser . This will reduce the air flow pressure friction loss from increases in pipe length and number of elbows and tees that an individual blower might have to overcome. The risers will terminate above grade along the east side of the new garage location.

The City's February "feasibility study" of interim remedial options did not recommend vapor extraction techniques because the uneven distribution and penetration of air was a concern. The decision was made to excavate contaminated soil because of these constraints. We believe that the proposed ventilation system will help diminish remaining soil contaminant levels as it prevents the infiltration of any vapors into the garage, tunnel, and Wintergarden. However, we still maintain that soil vapor extraction technology is not feasible or practical for the dense compacted till that will remain beneath much of the site.

Our proposed use of shot rock and gravel will limit the creation of dead zones between areas requiring ventilation and the air intake screened pipes. Our data indicated that the till is less contaminated than the soils and fill above. If the verification sampling indicates otherwise we will work with you to determine the best way to proceed.

Comment 4.

Section 6.0 Worker Health and Safety Plan- The plan must specify the action levels and types of Personal Protection Equipment (PPE). For example, there must be action levels to upgrade PPE to level C or level B. Also, the type of PPE associated with each level of protection must be specified. Please consult with Mr. David Napier of the New York State Department of Health for further details.

Response:

The action thresholds for changes in the level of PPE required for site workers have been established. We have prepared the attached General Protection Levels description for incorporation into the Health and Safety Plan (Attachment 2). Site work will begin in level D and be modified based on in-field monitoring results.

On page 4 of Marcor's Health and Safety Plan the action level of 5.0 ppm total organic vapor readings is identified as the trigger to upgrade from no respiratory protection (level D) to air purifying respirator fitted with a combination organic vapor /dust cartridge (level C). Assuming a protection factor of 10 for air purifying respirators, the action level for upgrade to supplied air respiratory protection (level B) is established at 50 ppm. Monitoring will take place both in the immediate area of the excavation and in the breathing zone of the workers. Monitoring at the limits of the exclusion zone and work site perimeter is addressed in the Community Health and Safety Plan.

Comment 5.

It must be documented that all workers in the exclusion zone meet the OSHA requirements in 29CFR 1910.120.

Response:

The contractor will provide documentation that all personnel within the exclusion zone have met the requirements of 1920.120. A daily site log will be kept by the SSHO, and the SSHO will require that any of the visitors or workers that enter the exclusion zone provide evidence that the individual has received the necessary training.

ADDENDUM 1
ATTACHMENT 1

SUBMITTAL COVER

BAUSCH & LOMB WORLD HEADQUARTERS
ROCHESTER, NEW YORK
PROJECT NO. 9213

LECHASE CONSTRUCTION INC.
300 TROLLEY BLVD.
ROCHESTER, NEW YORK 14606
L.C. PROJECT NO. 1900-01

LECHASE CONSTRUCTION

General Contractor
Construction Manager

300 Trolley Boulevard
P.O. Box 60830
Rochester, New York
14606-0830
716-254-3510
Fax 716-254-3871

TYPE OF SUBMITTAL (check one)

__ Product Data
__ Sample
__ Color Selection
__ Test Report
__ Schedule
__ Warranty
__ Record Document
__ Operating/Maintenance Data
__ Performance Data
__ _____

RECEIVED
JAN 3 1994
RAYMOND LECHASE

DESCRIPTION OF SUBMITTAL:

Product Name Drainage Fill Certification

Manufacturer same

Subcontractor/Supplier Dolomite Products Company Inc.

Section No.(s) 02710 Drawing No.(s) _____

Part/Paragraph 2.03B Detail Ref. _____

ARCHITECT'S ACTION

#1 STONE

APPROVED

C. A. D. 1-12-94

SUBMITTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS

SECTION Foundation Drainage

SUBMITTAL NO. 61

REVIEWED BY C.R. Capuano

DATE 12/20/93

Gradations of crushed stone; Penfield plant.
All values are percent passing.

SIEVE SIZE	# 2 CRUSHER RUN	# 1 CRUSHER RUN	2.03B DRAINAGE ITEM 605.0901 #1 STONE	#2 STONE	#1 & #2 MIXTURE
2"	100				
1 1/2"				100	100
1"		100	100	96	98
1/2"			95	12	54
1/4"	36	54	11	2	7
1/8"					
NO. 10			8		
NO. 20			2		
NO. 40	9	15			
No. 200	2.9	5.0	0.8	0.3	0.4

ATTACHMENT 2
GENERAL PROTECTION LEVELS

Equipment designed to protect the body against contact with known or anticipated chemical hazards have been divided into four categories according to the degree of protection afforded:

- Level A: Should be selected when the highest level of respiratory, skin and eye protection is needed.
- Level B: Should be selected when the highest level of respiratory protection is needed, but a lesser level of skin protection is required; Level B protection is the minimum level recommended on initial site entries until the hazards have been further defined by on-site studies.
- Level C: Should be selected when the types of airborne substances are known, the concentrations have been measured and the criteria for using air-purifying respirators are met. In atmospheres where no airborne contaminants are present, Level C provides dermal protection only.
- Level D: Should not be worn on any site with respiratory or skin hazards. This is primarily a work uniform providing minimal protection.

The level of protection selected is based primarily on:

- Types and measured concentrations of the chemical substances in the ambient atmosphere and their associated toxicity; and
- Potential or measured exposure to substances in air, splashes of liquids or other indirect contact with material due to the task being performed.

In situations where the types of chemicals, concentrations, and possibilities of contact are not known, the appropriate level of protection must be selected based on professional experience and judgement until the hazards may be further characterized. The individual components of clothing and equipment must be assembled into a full protective ensemble to protect the worker from site-specific hazards, while at the same time minimizing hazards and drawbacks of the personal protective gear itself. Ensemble components based on the

USEPA Levels of Protection are detailed below for levels B, C, and D protection.

Level B Protection Ensemble

Recommended

- Pressure-demand, full-facepiece self-contained breathing apparatus (MSHA/-NIOSH approved) or pressure-demand supplied-air respirator with escape SCBA;
- Chemical-resistant clothing (overalls and long-sleeved jacket; hooded one- or two-piece chemical splash suit; disposable chemical-resistant one-piece suit); disposable chemical-resistant one-piece suit);
- Inner and outer chemical resistant gloves;
- Chemical-resistant safety boots/shoes; and
- Hard hat.

Optional

- Coveralls.
- Disposable boot covers.
- Face shield.
- Long cotton underwear.

Meeting any one of the following criteria warrant the use of Level B protection:

The types and atmospheric concentrations of toxic substances have been identified and require the highest level of respiratory protection, but a lower level of skin and eye protection. These would be atmospheres:

- with concentrations Immediately Dangerous to Life and Health (IDLH)
- exceeding limits of protection afforded by a full-face air-purifying mask;
- containing substances for which air-purifying canisters do not exist or have low removal efficiency;

- containing substances requiring air-supplied equipment, but substances and/or concentrations do not represent a serious skin hazard;
- containing less than 19.5% oxygen; or
- with evidence of incompletely identified vapors or gases as indicated by direct reading organic vapor detection instrument, but those vapors and gases are not suspected of containing high levels of chemicals harmful to skin or capable of being absorbed through the intact skin.

Level B equipment provides a high level of protection to the respiratory tract, but a somewhat lower level of protection to skin. The chemical-resistant clothing required in Level B is available in a wide variety of styles, materials, construction detail and permeability. These factors all affect the degree of protection afforded. Therefore, a specialist should select the most effective, chemical-resistant clothing based on the known or anticipated hazards and task. Level B skin protection is selected by:

- Comparing the concentrations of identified substances in the air with skin toxicity data;
- Assessing the effect of the substance (at its measured air concentrations or splash potential) on the small area of the head and neck unprotected by chemical-resistant clothing.

Level C Protection Ensemble
Recommended

- Full-facepiece, air-purifying respirator equipped with MSHA and NIOSH approved organic vapor/acid gas/dust/msit combination cartridges or as designated by the Health and Safety Manager;
- Chemical-resistant clothing (overalls and long-sleeved jacket, hooded, one- or two-piece chemical splash suit or disposable chemical-resistant one-piece suit);
- Inner and outer chemical-resistant gloves;
- Chemical-resistant safety boots/shoes; and
- Hardhat.
- Coveralls;

- Disposable boot covers;
- Face shield;
- Escape mask;
- Long cotton underwear.

The use of Level C protection is permissible upon satisfaction of these criteria:

- Measured air concentrations of identified substances will be reduced by the respirator to below the substance's permissible exposure limit (PEL), threshold limit value (TLV), and/or the concentration is within the service limit of the cartridge;
- Atmospheric contaminant concentrations do not exceed IDLH levels; and
- Atmospheric contaminants, liquid splashes or other direct contact will not adversely affect the small area of skin left unprotected by chemical-resistant clothing.

Level C protection is distinguished from Level B by the equipment used to protect the respiratory system, assuming the same type of chemical-resistant clothing is used. The main selection criterion for Level C is that conditions permit wearing an air-purifying device. The device (when required) must be an air purifying respirator (MSHA/NIOSH approved) equipped with filter cartridges. Cartridges must be able to remove the substances encountered. Respiratory protection will be used only with proper fitting, training and the approval of a qualified individual. In addition, an air-purifying respirator can be used only if:

- Oxygen content of the atmosphere is at least 19.5% in volume;
- Substances are identified and concentrations measured;
- Substances have adequate warning properties;
- Individual passes a qualitative fit-test for the mask; and

- Appropriate cartridge/canister is used, and its service limit concentration is not exceeded.

An air monitoring program is part of all response operations when atmospheric contamination is known or suspected. It is particularly important that the air be monitored thoroughly when personnel are wearing air-purifying respirators. Continual surveillance using direct-reading instruments is needed to detect any changes in air quality necessitating a higher level of respiratory protection.

Level D Protection Ensemble

Recommended

- Coveralls;
- Safety boots/shoes;
- Safety glasses or chemical splash goggles;
- Hardhat.

Optional

- Gloves;
- Escape mask;
- Face shield.

The use of Level D protection is permissible upon satisfaction of these criteria:

- No hazardous air pollutants have been measured; and
- Work functions preclude splashes, immersion or the potential for unexpected inhalation of any chemicals; and
- Atmospheric contains at least 19.5% oxygen.

Level D protection is primarily a work uniform. It can be worn in areas where only boots can be contaminated, or where there are no inhalable toxic substances.